



**ALULA INTERNATIONAL AIRPORT**

**OEAO Aerodrome Manual**

**V.1.3 \_ Jan 2023**

**AIULA International Airport, KINGDOM OF SAUDI ARABIA**

**P.O. BOX: 900 ZIP CODE: 41921**

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## Preface

The Aerodrome Manual is a fundamental requirement of the certification process for granting the Aerodrome certificate by the GACA for continued safe operation of the Aerodrome.

This Aerodrome Manual and associated documents contain all the pertinent information of ALULA International Airport concerning the Aerodrome site, facilities, services, equipment, operating procedures, organization and management including the safety management system.

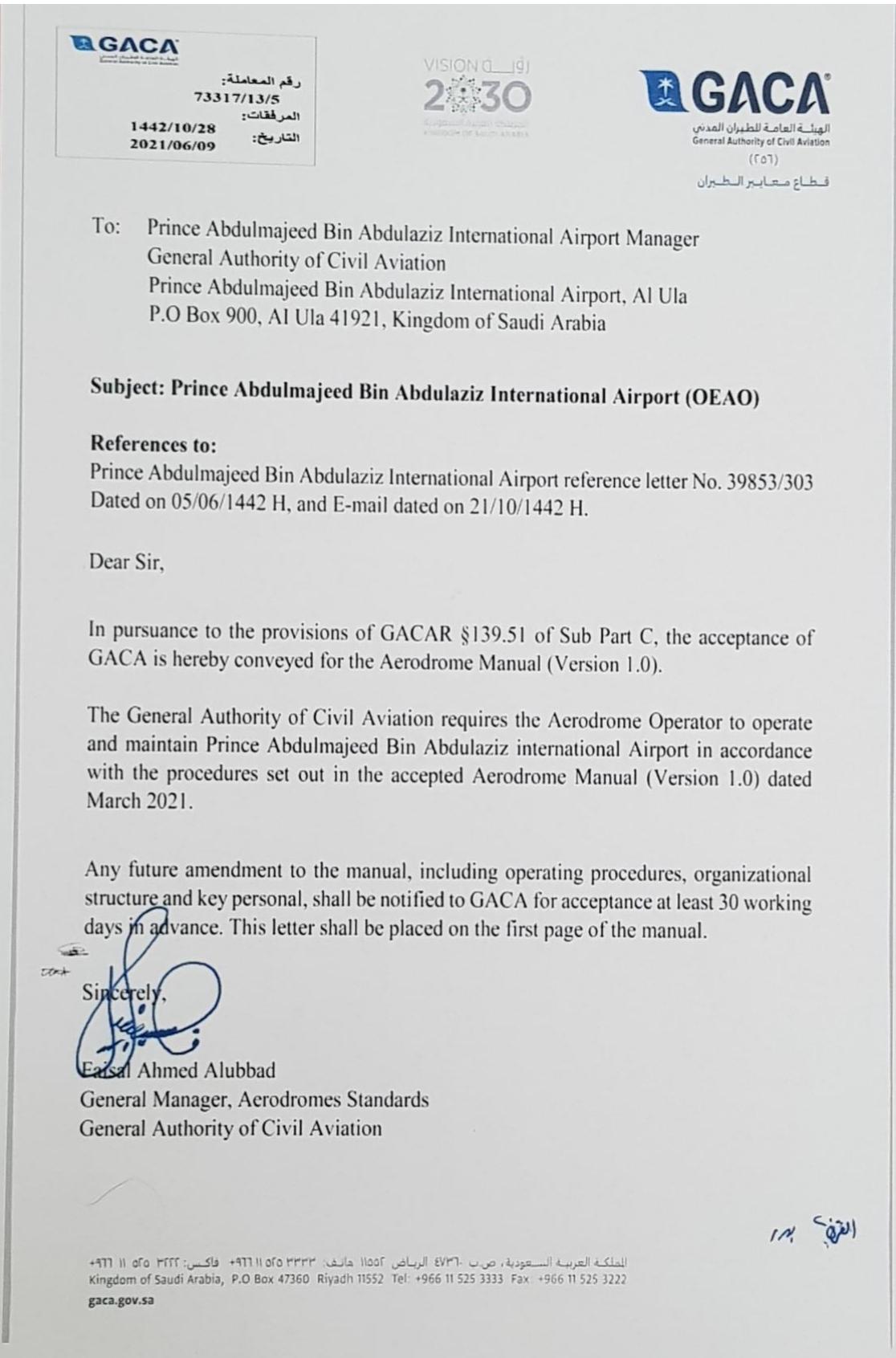
All the personnel responsible for maintenance and operation of the Aerodrome are enjoined upon to follow the security, safety and operational procedures all the time in order to meet the minimum safety standards required for aircraft operations and also to ensure the health and safety of employees, customers, business partners and members of the public.

ALULA International Airport management welcomes and encourages participation from all the concerned for the improvement and development of all security and safety standards within the context of this manual.

**Eng. Ali Bin Mohammed Masrahi**

**Accountable executive**

**CEO OF Cluster2**



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# Aerodrome Manual – Authorization



الهيئة العامة للطيران المدني  
General Authority of Civil Aviation

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Document Type: Aerodrome Manual (ADM)	Date: 23/06/2021
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THIS DOCUMENT HAS BEEN  
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REVIEWED BY:	AUTHORIZED BY:	
Edition Version 01.3	GACA Acceptance	Date:

# Aerodrome Manual - Record of Amendments

Revision Numbers	Revision Date	Incorporated by	Remarks
Version 01	22/02/2021	MUJAHED M. ALNSARI Safety Supervisor	Issue
Version 01.1	23/06/2021	MUJAHED M. ALNSARI Safety Supervisor	Old ADM name From: (Prince Abdulmajeed Bin Abdulaziz Airport) To : (ALULA Int. Airport)
Version 01.2	01/01/2022	MUJAHED M. ALNSARI Safety Supervisor	Airport operator chsnge From: (General Authority of civil Aviation)To : (cluster2 company ).
Version 01.3	20/01/2022	MUJAHED M. ALNSARI Safety Supervisor RAMI ALHAZMI Operation Supervisor	Update for new taxiway A extension,W5 and FBO hanger with its apron and ILS

# Aerodrome Manual – Checklist of Pages

<b>Part 1. Introduction</b>			
Date	Page	Date	Page

<b>Part 2. Technical Administration</b>			
Date	Page	Date	Page

<b>Part 3. Description of the Aerodrome ( Aerodrome Characteristics )</b>			
Date	Page	Date	Page

<b>Part 4. List of Authorized Deviations, if any</b>			
Date	Page	Date	Page

<b>Part 5. Operational Procedures</b>			
Date	Page	Date	Page

# Aerodrome Manual – Distribution List

# Aerodrome Manual – Acronyms

Acronym	Description
ABN	Aerodrome Beacon
ADM	Airport Duty Manager
ADP	Airfield Driving Permit
AEP	Airport Emergency Plan
AFTN	Aeronautical Fixed Telecommunication Network
AIB	Aviation Investigation Bureau
AIC	Aerodrome Information Circular
AIM	Aeronautical Information Management
AIP	Aeronautical Information Publication
AIP AMDT	Aeronautical Information Publication – Amendment
AIP SUP	Aeronautical Information Publication – Supplement
AIRAC	Aeronautical Information Regulation And Control
AIS	Aeronautical Information Service ....
ANS	Air Navigation Services
APU	Auxiliary Power Unit
ATC	Air Traffic Control
ATS	Air Traffic Services
CAT	Category
CAO	Cargo Aircraft Only
CFO	Central Forecast Office
DCP	Dry Chemical Powder
DG	Director General
DME	Distance Measuring Equipment
DMM	Duty Maintenance Supervisor
END	Stop-End (Related To RVR)
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
FATO	Final Approach And Take-Off Area
FRCC	Fire and Rescue Communication Center
FIDS	Flight Information Display System
FPL	Flight Plan
GACA	General Authority Of Civil Aviation
GACAR	General Authority Of Civil Aviation Regulation
GP	Glide Path
GPU	Ground Power Unit
IATP	International Airlines Technical Pool
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
JIG	Joint Inspection Group

<b>Acronym</b>	<b>Description</b>
LDI	Landing Direction Indicator
LGT	Lighting
LSA	Localizer Sensitive Area
LVO	Low Visibility Operations
LVP	Low Visibility Procedure
MAG	Movement Area Guidance
MET	Meteorology
SDS	Safety Data Sheets
NOTAM	Notice To Airmen
OEOA	ALULA International Airport– ICAO Code
OLS	Obstacle Limitation Surface
OPS	Operations
PANS	Procedures For Air Navigation Services
PAPI	Precision Approach Path Indicator
RESA	Runway End Safety Area
RFFS	Rescue And Fire Fighting Services
RSAF	Royal Saudi Air Force
RVR	Runway Visual Range
RWY	Runway
SANS	Saudi Air Navigation Services
SARP	Standards And Recommended Practices
SS	Safety Supervisor
SMS	Safety Management System
SOP	Standard Operating Procedures
TDZ	Touchdown Zone
THR	Threshold
TLOF	Touchdown And Lift-Off Area
TWY	Taxiway
ULD	Unit Luad Device
UTC	Coordinated Universal Time
ULH	ALULA International Airport– IATA Code
VFR	Visual Flight Rules
WDI	Wind Direction Indicator
FBO	Fixed Base Operation
RCU	Royal commotion of Alula
WMP	Wildlife Management Program

## Glossary - terms and definitions

Aerodrome	A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.
Aerodrome Manual	The Aerodrome Manual contains all the pertinent information concerning the aerodrome site, facilities, services, equipment, operating procedures, Organization, and management (including the Safety Management System) and is a fundamental requirement of the certification process; it demonstrates that the aerodrome conforms to the certification standards and practices, and that there are no apparent shortcomings which would adversely affect the safety of aircraft operations.
Airside	The movement area of an airport, adjacent terrain and buildings or portions thereof, access to which is controlled.
Apron	A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fueling, parking or maintenance.
Clearway	A defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an airplane may make a portion of its initial climb to a specified height.
Fire Communication Center	Authorization for an aircraft (or vehicle) to proceed under conditions specified by the fire and rescue communication center FRCC clearance is established 15 minutes before landing
Movement area	That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the maneuvering area and the apron(s).
NOTAM	A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.
Obstacle	All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight. Note: The term obstacle is used in Annex 4 Edition 10 solely for the purpose of specifying the charting of objects that are considered a potential hazard to the safe passage of aircraft in the type of operation for which the individual chart series is designed.
Obstacle free zone OFZ	The airspace above the inner approach surface, inner transitional surfaces, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly-mounted one required for air navigation purposes.
Runway	A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.
Runway end safety area RESA	An area symmetrical about the extended runway centerline and adjacent to the end of the strip primarily intended to reduce the risk of damage to an airplane undershooting or overrunning the runway.
Runway strip	A defined area including the runway and stopway, if provided, intended: a) to reduce the risk of damage to aircraft running off a runway; and b) to protect aircraft flying over it during take-off or landing operations.

Runway-holding position	A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower. Note: In radiotelephony phraseologies, the expression "holding point" is used to designate the runway-holding position.
Safety management system	A system for the management of safety at aerodromes, including the organizational structure, responsibilities, procedures, processes and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for control of safety at, and the safe use of, the aerodrome.
Stopway	A defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off
Take-off surface	That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking off in a particular direction.
Taxiway	A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including: a) Aircraft stand taxi-lane. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only. b) Apron taxiway. A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron. c) Rapid exit taxiway. A taxiway connected to a runway at an acute angle and designed to allow landing airplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.
Taxiway intersection	A junction of two or more taxiways
Taxiway strip	An area including a taxiway intended to protect an aircraft operating on the taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.
Threshold	The beginning of that portion of the runway usable for landing.
Touchdown zone	The portion of a runway, beyond the threshold, where it is intended that landing airplanes first contact the runway.

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# AERODROME MANUAL

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## PART 1 - Introduction

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# 1. Part 1 – Introduction

## 1.1 Purpose of the aerodrome manual

- 1.1.1 The aerodrome operator (Cluster2) and certificate holder, is required to comply with all General Authority of Civil Aviation (GACA) regulations applicable to its operations. As part of the aerodrome certification process, the aerodrome operator is required to implement and maintain an Aerodrome Manual.
- 1.1.2 The Manual contains cross references to procedures as described in the Airport Emergency Plan (AEP), Safety Management System (SMS), the Aeronautical Information Publication (AIP), the Security Manual, and the Aerodrome Manual (ADM) Standard Operating Procedures (SOPs).
- 1.1.3 The Manual is intended to ensure that the appropriate delegation of responsibilities and accountabilities from the management of the aerodrome operator are clearly indicated. This is required in order to maintain the safety, regularity and efficiency of aircraft operations on the aerodrome.
- 1.1.4 GACAR (Part 139) and advisory circulars (AC) are to be followed on Certification of Aerodromes.

## 1.2 Legal position regarding aerodrome certification as contained in the applicable regulation

- 1.2.1 The Regulations governing Aerodromes are based on Articles 2, 3, 4, 5, and 33 through 48 of the Civil Aviation Act that has been approved by the Council of Ministers Resolution No. 185 dated 17/07/1426H and issued by the Royal Decree No. M/44 dated 18/07/1426H (23/08/2005G).
- 1.2.2 This Aerodrome Manual has been prepared in compliance with the requirement as embodied in the GACAR 139 which is issued on the authority granted in Article 179 of the Civil Aviation Law 2010, by the President, General Authority of Civil Aviation, as a duly delegated representative of the GACA Board of Directors, in accordance with Order No.T-41, dated 30/12/1429H (28/12/2008G).
- 1.2.3 ALULA International Airport operated under authority granted by the Kingdom of Saudi Arabia to the aerodrome certificate holder, and serves the commercial, domestic flights, general aviation and non-scheduled military air traffic and details coordination for clearance by ACC in Jeddah.

## 1.3 Distribution of the aerodrome manual

- 1.3.1 It is distributed electronically to a list of recipients representing organizations involved with the operation of aircraft and supporting services. Individual electronic controlled copies of the Aerodrome Manual are held with recipients in Distribution List.

## 1.4 Procedure for distributing and amending the aerodrome manual

- 1.4.1 Aerodrome Manual Update and Control (SOP\_OEAO ADM\_01\_001) provides specific detailed guidance on how to administer the Aerodrome Manual.
- 1.4.2 **Manual Controller** – ALULA International Airport Operations Supervisor is the Aerodrome Manual Controller and their contact details are listed in Appendix B. The Operations Supervisor is to ensure that:

- 1.4.2.1 This Manual is maintained so that it contains and/ or refers to the current procedures developed and implemented to ensure the safe operation of the airport;
- 1.4.2.2 A record is kept of the persons who hold copies of the whole or a part of the Aerodrome Manual;
- 1.4.2.3 Updates of information for the Manual are distributed to those persons; and
- 1.4.2.4 A copy of the Manual shall be kept provided on the office of the airport director/any higher authority of the airport who is responsible of aerodrome operation.

**1.4.3 Amendment Frequency - The Aerodrome Manual will be reviewed and amended as below:**

- 1.4.3.1 Every 12 months;
- 1.4.3.2 And when changes take place to the physical characteristics of the aerodrome;
- 1.4.3.3 As and when there is a change in the standard operating procedure (SOP);
- 1.4.3.4 As and when an application for renewal of Recertification.

**1.4.4 Amendment Mechanism – The following amendment mechanism applies:**

- 1.4.4.1 GACA Aviation Standards Sector may direct an amendment to the Manual or any of the supporting SOPs as required;
- 1.4.4.2 Any recipient or user of the Manual, or staff member required to amend in this Manual shall notify the ALULA International Airport Operations Supervisor of any changes to procedures, errors or omissions, so any amendment to the Manual can be considered by the Manager responsible for the content;
- 1.4.4.3 Where an amendment is considered necessary, ALULA International Airport's Operations Supervisor is to facilitate the amendment process and ensure each section of the Manual (where appropriate) is approved by the relevant director prior to it being issued.
- 1.4.4.4 ALULA International Airport Operations Supervisor is to ensure amendments are circulated to holders of controlled copies immediately of an amendment being accepted by GACA.

## **1.5 State oversight**

- 1.5.1 Cluster2 is responsible for establishing and enforcing regulations applicable to ALULA International Airportin relation to the safe operations of the aerodrome.
- 1.5.2 GACA Aviation Standards Sector provides oversight ALULA International Airport operations through guidance, inspection, audits and investigation.
- 1.5.3 In order to assure safety and the continued validity of the ALULA International Airport's aerodrome certificate, it is the responsibility of the certified aerodrome to keep the Aerodrome Manual revised and up to date. SOP\_-OEAO\_-ADM\_-01\_-001, Aerodrome manual update and control outlines the process the certificate holder shall apply.

## **1.6 Authority and approval**

- 1.6.1 Aerodrome manual is to be prepared and signed by airport director or by any higher authority of the airport who is responsible for aerodrome operation;
- 1.6.2 The signed copy of the aerodrome manual shall be submitted to GACA President for acceptance; and
- 1.6.3 The aerodrome manual shall be accepted by GACA President or his designee.

## **1.7 Conditions for use of the aerodrome**

- 1.7.1 The aerodrome must at all times, when it is available for aircraft takeoff and landing, be available to all persons on equal terms and conditions as per GACA Regulation (GACAR) Part 139. Additionally, it is the responsibility of ALULA International Airport's director to identify changes to the aerodrome and promulgate accurate updates to GACA for the Aeronautical Information Service and subsequent promulgation of the AIP.
- 1.7.2 Hours of operations – 04:00-20:00 (07:00- 23:00 Local Time)
- 1.7.3 Type of traffic permitted – Instrument Flight Rules (IFR) / Visual Flight Rules (VFR).
- 1.7.4 The aerodrome reference code is (4E) outer wheel track not more than 10.93 m
- 1.7.5 The critical aircraft which can operate at this airport is code (D) outer wheel track not more than 10.93 m

## **1.8 Available aeronautical information system and procedures for its promulgation**

- 1.8.1 The Kingdom of Saudi Arabia AIP is published by SANS AIM Section
- 1.8.2 The GACA AIP forms part of the integrated information package of the Aeronautical Information Management (AIM), details of which are given in Part 5 of this Manual.
- 1.8.3 Aeronautical Information Services Briefing Office – NIL
- 1.8.4 Meteorology (MET) Briefing Office – HO.
- 1.8.5 The promulgation of the Aeronautical Information service such as Notice to Airmen (NOTAM) shall be originated by ALULA International Airport Operations Supervisor and approved by Airport Director. Data or information related to problems identified during Inspections of the Movement Area is to be provided by the Airside Operations team to AIM. NOTAMs and other forms used to disseminate information shall be issued immediately to avert unsafe hazardous operations. When corrective action has been taken, users are to be notified by NOTAMs and other expeditious means. For each respective area, the following responsibilities apply:
- 1.8.6 Maintenance of navigational aids, VORTAC and Instrument Landing System (ILS); Changes in Frequency is the responsibility of chief executive of Saudi Air Navigation Services (SANS);

### **1.8.7 Emergency NOTAM requests - These can be sent by:**

Fax:+966 14 8847107

AFS: NIL

Telex: NIL

Phone: +966 14 8847100/+966 14 8847101

Details of each request must contain the following:

- 1.8.7.1 Identification/ Location (Airport): ALULA International Airport

- 1.8.7.2 Date, time of start (UTC) (e.g. date-month-time: 22-03-0500Z = 22 March 0500Z);
- 1.8.7.3 Date, time of finish (UTC);
- 1.8.7.4 Time schedule (if appropriate); and
- 1.8.7.5 Text of NOTAM (i.e. what is happening in plain language).

Airport SITA address: Farhan.ghufran@jeraisy.net

Airport Email Address: ULA@GACA.GOV.SA

## 1.9 Obligations of the certificate holder

- 1.9.1 The certificate holder is responsible for ensuring all aerodrome certification processes are followed, together with the continued validity of the aerodrome certificate, and that the safety, regularity and efficiency of aircraft operations at the aerodrome are maintained at all times.
- 1.9.2 In compliance with GACAR Part 139 - Certification and Operation of Aerodromes and conditions stated on the aerodrome certificate, the certificate holder has the obligation to ensure implementation of the following:
  - 1.9.2.1 It shall maintain an adequate number of qualified and skilled personnel to perform all critical activities for aerodrome operations and maintenance;
  - 1.9.2.2 It shall continue to implement a program to upgrade the competency of its personnel to enable to perform task latter a) above;
  - 1.9.2.3 It shall ensure the Aerodrome Manual and associated SOPs (which outline the means of how to comply with GACA regulations) are continuously updated in accordance with any changes to the aerodrome physical characteristic, procedures or operational needs;
  - 1.9.2.4 It shall ensure the established Safety Management System (SMS) for the aerodrome is managed in an effective manner and is improved where necessary;
  - 1.9.2.5 It shall ensure all aerodrome users including fixed base operators, ground handling agencies and other organizations will cooperate to promote safety at, and the safe use of, the aerodrome by immediately informing the responsible personal of accidents, incidents, hazards, defects and faults which have a bearing on safety;
  - 1.9.2.6 It shall ensure compliance with and the implementation of all the Aerodrome operations procedure including Safety Management System (SMS) and Aerodrome Emergency Plan (AEP) SOPs as referenced in the Manual; and
  - 1.9.2.7 It shall ensure adherence to notifying and reporting immediately to the AIM, FRCC and pilots (within the specified time limits) any limitations that will affect the safe operation of the aerodrome such as:
    - a. Notification of changes to the aerodrome facilities, equipment and level of service planned in advance; and
    - b. Issues requiring immediate notification such as obstacle hazards, level of service, movement area closures and other conditions or circumstances essential for pilot information.
- 1.9.3 The certificate holder is responsible for ensuring adherence by airport users to the specific requirements of the Aerodrome Manual
- 1.9.4 The Operations Supervisor are the custodians of the Aerodrome Manual and any changes, updates and annual reviews will be the responsibility of Operations Supervisor.

## **1.10 Operational overview**

### **1.10.1 Organizational structure**

1.10.1.1 The organizational chart for ALULA International Airport identifies the Departments with specific roles and responsibilities for operational and safety functions. (see appendix A)

### **1.10.2 Training and assessment**

1.10.2.1 Training and assessment of Operations Officers shall be done by appropriately qualified, competent and experienced persons (which may need to be sourced externally) and supplemented by in-house staff with on-the-job training. Any external service providers should utilize ALULA International Airport developed training material that meets the requirements of GACA to achieve prescribed levels of competency

1.10.2.2 Minimum entry-level training is to be provided to Operations Officers who can progress to higher levels only after successful training and assessment procedures are completed together with appropriate practical experience in a competency based system.

### **1.10.3 Contact details of persons responsible**

1.10.3.1 The contact details for all persons involved in operational and safety functions are listed in Appendix B.

1.10.3.2 ALULA International Airport International Airport Operations Supervisor is responsible for maintaining the contact list.

### **1.10.4 Safety Management System**

1.10.4.1 A SMS is in place providing guidance in effectively managing and controlling the safety functions of ALULA International Airport including the organizational structure, management responsibilities and key focus areas.

1.10.4.2, ALULA International Airport's director, is the Manual Controller of the Airport SMS Manual.

1.10.4.3 The Manual Controller is responsible for the amendment process and for notification of amendments to all holders of controlled copies.

1.10.4.4 The director and Safety supervisor are to maintain the distribution list for the Airport SMS.

### **1.10.5 Airport Emergency Planning**

1.10.5.1 The Fire Chief is the Manual Controller for the Airport Emergency Plan (AEP) at ALULA International Airport.

1.10.5.2 The Manual Controller is responsible for the amendment process and for notification of amendments to all holders of controlled copies.

1.10.5.3 The Fire and Rescue Chief shall maintain the distribution list for the AEP.

### **1.10.6 Airport Security Plan**

- 1.10.6.1 Security affairs manager at Western Airport sector is the Manual Controller for the Airport Security Plan.
- 1.10.6.2 The Manual Controller is responsible for the amendment process and for notification of amendments to all holders of controlled copies.
- 1.10.6.3 Security affairs manager at Western Airport sector has to maintain the distribution list for the Airport Security Plan according to national civil aviation security program.

### **1.10.7 Meteorological Services technical manuals**

- 1.10.7.1 The General Authority of Meteorology and Environmental Protection (GAMEP) is responsible for the currency and identification of the technical manuals provided for the operation and maintenance of the equipment installed to provide Runway Visual Range (RVR) measurements.

### **1.10.8 Changes to the aerodrome, certificate holder or its systems**

- 1.10.8.1 In accordance with GACAR Part 139, in order to enable the President of GACA to determine continued compliance with the applicable GACAR, ALULA International Airport Manager must report to the Western Airports Sector General Manager to notify the Vice President for Airports Sector of any proposal to carry out any of the following changes, before such changes take place:
  - 1.10.8.2.1.1 The location of the principal base of operations of the certificate holder;
  - 1.10.8.2.1.2 Any designated personnel; or
  - 1.10.8.2.1.3 The facilities, procedures, systems, work scope and staff that could affect the aerodrome and its operations.
- 1.10.8.3 Each significant change to a system required under GACAR Part 5 Safety Management Systems or Part 139 must be accepted by the President of GACA prior to implementation. An application for acceptance must be submitted in writing to the President, and ALULA International Airport must demonstrate to the President, on the basis of submission of proposed changes to the Manual, and before implementation of the change, that it will continue to comply with all applicable GACAR Parts during and after implementation. The President will establish the conditions under which ALULA International Airport (under GACAR Part 139) may operate during such changes.

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# AERODROME MANUAL

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## PART 2 - Technical Administration

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## **2. Part 2 – Technical administration**

### **2.1 Name and address of the aerodrome**

ALULA International Airport, P.O BOX 900, ALULA 41921, Kingdom of Saudi Arabia.

Telephone: +966 12 6532173

Fax: +966 12 6530197

### **2.2 Name and address of the aerodrome operator**

cl

Alula International Airport. Alula. Saudi Arabia

TEL: +966 14 8847100

FAX: +966 14 8847107

Free contact number: 8001168888

Central : 0115253333

Saudi Arabia airports Contact number : 920011233

Address : Riyadh - King Abdulaziz Center For National Dialogue

P.O.Box 47360 Riyadh Area Code 11552.

Email : gaca-info@gaca.gov.sa.

### **2.3 The name of the accountable executive**

**ENG. ALI BIN MOHAMMED MASRAHI**

**CEO OF CLUSTER2 COMPANY**

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# AERODROME MANUAL

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## PART 3 - Description of the Aerodrome

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## **Part 3 – Description of the aerodrome (Aerodrome characteristics)**

### **3.1 Details of the following:**

#### **3.1.1 Latitude and longitude of the aerodrome reference point in World Geodetic System 1984 (WGS-84) format**

- 3.1.1.1 Latitude: 26°29'0"N
- 3.1.1.2 Longitude: 038°7'1"E

#### **3.1.2 Elevation of:**

- 3.1.2.1 Aerodrome: 2046 ft AMSL
- 3.1.2.2 Apron: 2017ft

### **3.2 Plans showing the aerodrome characteristics:**

All the maps are mentioned in Appendix D.

### **3.3 Description, height and location of obstacles that infringe upon the standard protection surfaces, whether they are lighted and if they are noted in the aeronautical publications.**

The following information has been provided hereunder in the same order of the AIP of GACA of the Kingdom of Saudi Arabia. (See appendix C)

### **3.4 Procedures for ensuring the plans are up to date and accurate.**

SOP\_OEAO\_ADMIN\_01\_001, Aerodrome Manual Update and Control provides specific detailed guidance on how to update the Aerodrome Manual including plans.

### **3.5 Data for, and the method used to calculate, declared distances and elevation at the beginning and end of each declared distance.**

The following information has been provided hereunder in the same order of the AIP of GACA of the Kingdom of Saudi Arabia. (See appendix C)

### **3.6 Details of the surfaces, dimension and classification or bearing strengths of runways, taxiways and aprons**

The following information has been provided hereunder in the same order of the AIP of GACA of the Kingdom of Saudi Arabia. (See appendix C)



# AERODROME MANUAL

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## PART 4 - List of Authorized Deviation, If any

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## **Part 4 – List of Authorized Deviation, if any**

There are no deviations applied

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# AERODROME MANUAL

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## PART 5 - Operational Procedures

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## **5. Part 5 – Operational Procedures for:**

This part of the Aerodrome Manual embodies the operating procedures and safety measures required in order to maintain safety, quality and regularity on its day-to-day operations.

### **5.1 Promulgation of aeronautical information**

#### **5.1.1 Contact details of responsible persons**

- 5.1.1.1 The contact details for all persons involved in operational and safety functions are listed in Appendix B of this Manual.

#### **5.1.2 Purpose and scope**

The purpose of this subpart is to ensure that pilots, Air Traffic Controllers, SANS and the AIM are notified of any changes in the physical condition of the airport, new obstacles or any other significant events which may affect the safety of aircrafts using the aerodrome.

#### **5.1.3 Persons responsible**

- 5.1.3.1 This procedure applies to all staff who have a responsibility to report on the serviceability of ALULA International Airport or who have a responsibility to ensure that the information published in the AIP is current and accurate. This will predominantly involve Airport Operations Supervisor and other team members.

#### **5.1.4 Reporting of changes to the aerodrome information set out in the AIP**

- 5.1.4.1 Specific guidance is provided in SOP\_(OEAO)\_ADM\_01\_002, Aeronautical Information System promulgation and update which details the process of review of specific sections of the aeronautical information.

- 5.1.4.2 The above SOP applies to Airport Operations staff and the accountable executive for operations. The accountable executive for this SOP is the Airport Operations Supervisor. Certain technical information needs to be published by GACA as provided by ALULA International Airport this includes:

- a. Runway physical characteristics
- b. Taxiway characteristics
- c. Aircraft Parking/ Docking Chart
- d. Local traffic protocols for aircraft movement
- e. Visual aids and lighting
- f. Low visibility procedures
- g. NOTAM

- 5.1.4.3 All of this information is provided to SANS to enable the production of AIP. As infrastructure or operational changes occur then the aerodrome information may be impacted accordingly.

- 5.1.4.4 ALULA International Airport Operations Supervisor is responsible for ensuring that the published information, for which responsible, is maintained in an accurate form. This includes checking AIP information, changing AIP information, issuing NOTAM and briefing aircraft operators.

- 5.1.4.5 Any situation or occurrence that may reasonably be expected to have an effect on the safety of aircraft operations is reported via the AIM. Urgent matters will also be reported to FRCC either by telephone or by radio.
- 5.1.4.6 Any situation or occurrence that may reasonably be expected to have an effect on the safety of aircraft operations shall be reported to Accident Investigation bureau AIB by using the official form available on AIB website: [Aib.gov.sa](http://Aib.gov.sa) via their Email : [report@aib.gov.sa](mailto:report@aib.gov.sa) and using See APPEINDEX E12
- 5.1.4.7 The Aerodrome Reporting Officer shall be the operation supervisor on duty. The Airside Operations Officer can be contacted from 24/7 on (014 8827102)
- 5.1.4.8 Any change shall be reported by the Aerodrome Reporting Officer during and outside the normal hours of aerodrome operations to:  
Officer-in-Charge, AIM Section, SANS  
Bani Malek, Jeddah**
- 5.1.4.9 Tel. No.: (+966 12 6717717) Fax No.: (+966 12 6719041).**

### **5.1.5 Requesting the issuance of NOTAMs**

- 5.1.5.1 Any changes to the maneuvering area conditions, or any new obstacles, that affect the serviceability of the maneuvering area are to be reported immediately to FRCC and to the NOTAM office. NOTAMs for temporary changes to ALULA International Airport may be requested only by trained Airport Officers.
- 5.1.5.2 NOTAM are used to advise pilots and other persons concerned with flying operations about matters that may affect the safety of aircraft operations. In relation to ALULA International Airport this includes temporary changes in published information, any unserviceability, works, newly detected obstacles and new facilities.
- 5.1.5.3 Some examples of situations requiring NOTAM action are:
  - a. A change in the serviceability of the maneuvering area;
  - b. A change in the operational information published in the AIP;
  - c. Works affecting the maneuvering area or the Obstacle Limitation Surface (OLS);
  - d. Obstacles in the OLS;
  - e. A significant increase in bird activity;
  - f. A change in the availability of airport visual aids, especially airport lighting facilities; and
  - g. Any significant event affecting the safety of aircraft using ALULA International Airport International Airport.
- 5.1.5.4 The Officer requesting that a NOTAM be issued is to advise the NOTAM Office in the standard NOTAM format using the form provided by the NOTAM Office.
- 5.1.5.5 Broadly, NOTAMs can be divided into two categories: i.e., short-term and long-term NOTAMs.
  - 5.1.5.5.1A short term NOTAM contains information in respect of changes/ unserviceability for more than two hours and less than 24 hours in respect of locations of direct importance to aircraft operations, requiring limited distribution to adjacent States only.

- 5.1.5.6 A Long-term NOTAMs are NOTAMs, other than works NOTAMs that are required for a period of at least three months. They contain information of a general and lasting nature affecting aircraft operations in general. NOTAMs advising permanent changes in the published information (including requests to change an existing NOTAM status from temporary to permanent) may be requested only by the ALULA International Airport Operations Supervisor.
- 5.1.5.7 This series of NOTAMs is issued only by the International NOTAM Office, ALULA International Airport under the authority of GACA and given wide publicity by dissemination to all the recipients of NOTAMs from the NOTAM Office in Jeddah.
- 5.1.5.8 All requests for NOTAMs from the ALULA International Airport Operations Officer and copies of the issued NOTAM are maintained on file by the Operations Supervisor. Such filing may be in electronic format. Any trained Airport Officers are to raise, review and/ or cancel NOTAM as required.
- 5.1.5.9 Permanent changes in published information may also be advised in writing directly to AIM by the Airport Director, with a copy of the advice forwarded to the GACA Aerodrome Inspector responsible for overseeing Airport operations.
- 5.1.5.10 Copies of correspondence and NOTAM requests, together with a copy of any NOTAM issued, are maintained on file by the Airport Operations Supervisor. Such filing may be in electronic format.
- 5.1.5.11 The Operations Supervisor cancels permanent NOTAMs as required, or when any permanent change to published information has been incorporated into the AIP.
- 5.1.5.12 Information on major/ minor changes of a permanent nature is also promulgated as 'G' series NOTAM which ultimately form part of the AIP as AIP-SUP. The NOTAMs which do not qualify for issuance of Supplements are raised as AIC and issued by GACA.
- 5.1.5.13 For the Airport Operator, the Airport Operations Supervisor is responsible for notifying FRCC in terms of NOTAM issuance.
- 5.1.5.14 The International NOTAM Office receives aeronautical information through the Aeronautical Fixed Telecommunication Network (AFTN) and disseminates information by issuing NOTAMs. The NOTAMs listed for International distribution are promulgated in series A, B, C & G.
- 5.1.5.15 For the Airport Operator, NOTAMs will be issued by:  
ALULA International Airport Operations Supervisor,  
P.O. Box 900, ALULA 41921 Kingdom of Saudi Arabia  
Phone: +966 12 6532173 Fax: +966 12 6530197

## **5.1.6 Recording the changes-related reporting and requesting procedures**

- 5.1.6.1 A checklist of NOTAM currently in force is issued every month. The list is followed by a printed summary of NOTAM distributed by mail to all recipients of the integrated AIP for the Kingdom of Saudi Arabia. It contains a plain language presentation (in English) of the valid NOTAMs and information about the number of the latest issued AIP (Amendment) AMDT, Aeronautical Information Regulation and Control (AIRAC) AIP AMDT, AIP SUP and AIC as well as the number of the elements issued under the AIRAC that will become effective or, if none, then a Nil AIRAC Notification.

- 5.1.6.2 An AIC is a notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.
- 5.1.6.3 An AIC should be issued whenever it is desirable to promulgate a long-term forecast of any major change in legislation, regulation, procedures or facilities as well as information of an explanatory or advisory nature liable to affect flight safety or concerning technical, legislative or purely administrative matters.
- 5.1.6.4 AIC are divided by subject and issued in two series (A and B). While AIC series A contains information affecting International civil aviation and is to be given International distribution, AIC series B contains information affecting national aviation only and is to be given national distribution.
- 5.1.6.5 Each AIC is numbered consecutively within each series. The year, indicated by two digits, is part of the series number of the AIC .A checklist of AIC currently in force is issued as a self-contained AIC at the end of each calendar year.
- 5.1.6.6 The AIRAC system is aimed at advance notification based on common effective dates, of circumstances that necessitate significant changes in operating practices requiring amendments to charts, route manuals and the like.
- 5.1.6.7 The AIRAC information is to be issued so that the information will be received by the user no later than 28 days before the change or 56 days for major changes. In addition, a NOTAM will be issued giving a brief description of the content, effective date and reference number of the AIRAC AIP AMDT or AIRAC AIP-SUP that will be effective on that date. Trigger NOTAM will remain in force as a reminder in the pre-flight information bulletin until the new checklist or summary is issued.
- 5.1.6.8 If no information was promulgated at the AIRAC date, a nil notification has to be issued by NOTAM no later than one AIRAC cycle before the AIRAC effective date concerned.
- 5.1.6.9 The SANS/ AIM of Saudi Arabia has scheduled AIRAC amendments to the AIP every two AIRAC dates (i.e. 56 days).
- 5.1.6.10 These publications are issued in the form of AIP amendments or AIP-SUP and will be identified by the acronym "AIRAC". These are the only effective/ publishing dates available for publishing changes to AIP information.
- 5.1.6.11 Additional amendments to the AIP (i.e. for AIRAC dates crossed out) will be considered only in cases of urgent necessity.

#### **5.1.7 Process for ensuring that Aerodrome Reporting Officers are trained and competent**

- 5.1.7.1 The Operations Supervisor is to ensure that yearly competency assessments for the Airside Operations Officers are completed.
- 5.1.7.2 Assessment results for each Operations Officer shall be maintained on file in hard copy format by the AIUla International Airport Operations Supervisor. If the Operations Officer requires recurrent training, the assessor shall notify the AIUla International Airport Operations Supervisor in writing. The Operations Supervisor shall organize appropriate re-training in the areas identified by the approved assessor.

On completion of re-training the Operations Officers must undertake reassessment conducted by an approved assessor.

## 5.2 Control of access

### 5.2.1 Contact details of responsible persons

5.2.1.1 The contact details for all persons involved in operational and safety functions are listed in Appendix B of this Manual.

### 5.2.2 Purpose and scope

- 5.2.2.1 The purpose of this subpart is to ensure the safety of aircraft operations by controlling access to airside by permitting authorized persons, vehicles and equipment only into the movement area.
- 5.2.2.2 This procedure applies to all staff so as to ensure the security and integrity of the airport.
- 5.2.2.3 As the Security Program is a restricted document, the provisions relevant to movement area access are summarized in this section.
- 5.2.2.4 The ALULA International Airport Security Program is published and distributed independently of the Aerodrome Manual with the general objective being to safeguard ALULA International Airport International Airport's operations, including personnel, assets and infrastructure against unlawful interference with aviation. The Security Program is developed in accordance with the requirements of State legislation.

### 5.2.3 Persons responsible

5.2.3.1 The responsible authorities for controlling access to airside of the aerodrome are as follows:

- a. **ALULA International Airport Director**, - The Director, being chief controlling authority, exercises the overall control of airside access through the Airport. This includes entry into the terminal buildings and implementing the aviation security guidelines.

The RSAF is accountable to the Director for the secure operational environment at ALULA International Airport, including facilities and personnel behavior.

- b. **Airport Security Unit manager RSAF** - Security unit, headed by the Airport Security Unit manager RSAF, include cooperating with GACA to provide a uniformed and armed security force to enhance safety by covering all mandatory and regulatory obligations relating to the prevention of unlawful interference in civil aviation, except aircraft sabotage, which is an airline responsibility.

- c. **Royal Saudi Air Force** - The role of RSAF in relation to the prevention of unlawful interference in civil aviation includes:

1. Managing access control to operational areas (i.e. deployment at all entry points to the airside, checking airport fencing and inside the terminal buildings);
2. Responsibility for the discipline and provision of security services at the airport through armed personnel;
3. Assisting in the implementation of contingency plans related to threats to aviation and the airport wherever roles are assigned;
4. Maintaining readiness to meet any immediate security threat to the airport and associated facilities; and
5. Monitoring day-to-day security and liaising with the Chief, Aviation Security, RSAF and ALULA International Airport Director, Security Affairs of the airports sector, as appropriate.

#### **5.2.4 Control of the access points**

- 5.2.4.1 Entry into the movement area is controlled by way of identity verification and passes issued as required. All aircraft operators, aerodrome fixed-base operators, GACA and other government departments requiring access to the aerodrome are to comply with the applicable requirements. The various types of identity verification and passes issued currently at ALULA International Airport are as follows:

Type of Identity Verification/ Pass	Issued by
Photo identity cards for staff	RSAF
Temporary photo identity card	RSAF
Visitor's permit through the issue of airport entry tickets	RSAF
Vehicle permits both permanent and temporary	Approval by ALULA International Airport ; Issuance by RSAF
Tokens for contracting staff for a specified area and period to carry out construction/ maintenance works	Approval by ALULA International Airport ; Issuance by RSAF
Airfield driving permits	ALULA International Airport

**Table 1: Control of the access points**

- 5.2.4.2 Photo identity cards for access into the terminal building/ operational areas, restricted areas are issued by RSAF against an application.
- 5.2.4.3 The photo identity cards are color-coded and provide access (unrestricted entry) to designated coded areas such as Administration, Terminals, Apron only and Apron/ Maneuvering area.
- 5.2.4.4 Apart from the above, temporary passes can be obtained from the Airport director and RSAF department (from 08:30 to 17:00 local time) hours on all working days. However, after 17:00 hours and on weekends and holidays, temporary passes can be obtained from the RSAF Duty Officer after approval from the ALULA International Airport Duty Manager (ADM) for a maximum of 3 days at a time.
- 5.2.4.5 While ensuring that access points in the perimeter are kept to a minimum, these access points are also manned 24 hours a day seven days a week by airport security personnel. All vehicles and personnel entering or leaving through these points are subjected to security checks.
- 5.2.4.6 ONE gate provided in the perimeter for access to the operational area include:
- 5.2.4.6.1 Gate number (6) is used as the main gate for employees and vehicles;

#### **5.2.5 Control of the perimeter**

- 5.2.5.1 The entire airport is provided with a security perimeter fence with length of 24,500 Meter and height of 3M with cyclone wire, and all weather motor-able inner perimeter road with watchtowers at appropriate locations. The perimeter is well guarded by static posts, augmented with mobile patrolling.
- 5.2.5.2 The perimeter security includes the following equipment/ facilities:
- 5.2.5.2.1 Patrolling jeeps;
- 5.2.5.2.2 Arms;

- 5.2.5.2.3 Radio telephony communication sets both walkie-talkie and base sets;
  - 5.2.5.2.4 Hand held metal detectors; and
  - 5.2.5.2.5 Night vision binoculars.
- 5.2.5.3 The airport security unit manager RSAF is responsible for preventing the unauthorized entry of persons, vehicles, equipment, animals or other things onto the movement area.
  - 5.2.5.4 The RSAF undertakes regular inspections of perimeter tenant facilities to ensure they are maintaining the integrity of their access control systems to deter and detect unauthorized access into the airside area.
  - 5.2.5.5 The Access Control Unit is responsible for the deployment of security personnel in order to ensure that no unauthorized entries of persons, vehicles, equipment, animals or other things occur within the movement of ALULA International Airport .

#### **5.2.6 Aerodrome access during emergency responses**

- 5.2.6.1 During a response to an aircraft incident or accident, the responding emergency services will respond to Gate (6), or to another gate nominated by the ALULA International Airport Duty Manager. The access gate shall be staffed by the RSAF together with ALULA International Airport operations representatives. The ALULA International Airport Airside Operations Officer shall ensure that any gate used for emergency vehicle access is suitably staffed to prevent unauthorized access.
- 5.2.6.2 Prior to recommencing either partial or full aircraft operations, the ALULA International Airport Emergency Response Coordinator shall coordinate with agencies and arrange a thorough inspection of the movement area for any unauthorized access.
- 5.2.6.3 Crash Gates:
  - a) Crash Gate No. 1 located //northern west ///
  - b) Crash Gate No. 2 located // southern east///

## **5.3 Emergency Planning (AEP)**

### **5.3.1 Purpose**

- The AEP will address all-inclusive emergencies that occur on or directly impact, an airport or adjacent property that;
- Is within the authority and responsibility of the airport to respond; or
- May present a threat to the airport because of the proximity of the emergency to the airport; or
- Where the airport has responsibilities under local/regional emergency plans by mutual aid agreements

### **5.3.2 Responsibility**

- Alula International Airport airport manager has overall responsibility/accountability for developing, reviewing, updating, and testing of the AEP, in accordance with GACA/ICAO regulations & guidelines. In this matter, he will be supported by the Aerodrome Emergency Plan Committee, and/or airport operators, and all other key individuals/major organizations that have a role in the airports emergency plan will support him.

### **5.3.3 AEP Validation/Acceptance of Authority**

- GACA will be the Governing body of oversight authority, for the validation of acceptance of the AEP, during initial / renewal of Aerodrome Certification, to include revisions.

### **5.3.4 AEP Document**

- Reference; Alula International Airport Airport Emergency Plan, current edition.

## **5.4 Rescue and firefighting service (RFFS)**

### **5.4.1 Policy Statement**

- The principal objective of Alula International Airport -RFFS is to save lives in the event of an aircraft accident or incident occurring at, or in the immediate vicinity of, an airport. The Alula International Airport -RFFS is provided to create and maintain survivable conditions.
- Fire rescue service at the airport is under the administrative control of Airport Director.
- The facilities, equipment, personnel and procedures in place at Alula International Airport meet the GACA requirement as specified in the Alula International Airport Fire & Rescue (RFFS) Standard Operating Procedures (SOPs) manual.
- Fire rescue services supervise by fire chief to ensure that the service is provided at all time in conformity with GACAR 139 and International standards, which also responsible for ensuring that the services provided is organized, equipped, staffed, trained and operated in such a manner as to achieve its principle objective of saving lives in the event of an aircraft accident or incident.
  - Internal audits and evaluation conducted by Alula International Airport fire rescue services management team.

- External audits conducted by aerodrome standards department GACA).

#### **5.4.2 Fire Prevention**

- The fire prevention program at Alula International Airport is an essential component in ensuring the continual preservation and safekeeping of costly and irreplaceable assets such as facilities, building, and indispensable equipment. Also, the prevention of fire directly affects people using or working on Alula International Airport by influencing the level of life safety they are exposed to or afforded.
- Fire prevention officer at Alula International Airport -RFFS provide an aggressive Fire Prevention inspection and personnel training program to reduce the possibility of fire within Airport in accordance with national and International Standards.
- Ensure the highest Fire Prevention and Fire Protection Standards are enforced at Airport and its facilities through effective inspection, reporting, corrective / preventive actions and record keeping.
- Details of the fire prevention can be found in Alula International Airport - RFFS SOPs and RFFS fire prevention program.

#### **5.4.3 Aerodrome Level of Protection to be provided – RFFS –Category Classification:**

Alula International Airport is CAT 7. Fire and Rescue chief maintains this category to the GACA standards required as defined in GACAR PART 139 – CERTIFICATION AND OPERATIONS: AERODROMES.

CAT	NO. OF ARFF	Water (L)	Discharge Rate foam solution / minute (L)	Dry Powder (Kg)
7	3	12100 L	5300 L/M	225 Kg

#### **5.4.4 Aerodrome Level of Protection – RFFS Category Upgrading of Classification:**

- Alula International Airport has the capabilities and resources necessary to properly and effectively upgrade fire protection coverage to next CAT 8 of Category classification as defined in GACAR PART 139 – CERTIFICATION AND OPERATIONS: AERODROMES.

CAT	NO. Of ARFF	Water (L)	Discharge Rate foam solution / minute (L)	Dry Powder (Kg)
8	3	18200 L	7200 L/M	450 Kg
9	3	24300 L	9000 L/M	450 Kg

#### **5.4.5 Aerodrome Level of Protection – RFFS Category Downgrading of Classification:**

- Alula International Airport has the authority to recommend the downgrading of its aerodrome operations, due to minimized/degrading resources of its RFFS capabilities as defined in GACAR PART 139 – CERTIFICATION AND OPERATIONS: AERODROMES.

CAT	NO. OF ARFF	Water (L)	Discharge Rate foam solution / minute (L)	Dry Powder (Kg)
6	2	7900 L	4000 L/M	225 Kg
5	1	5400 L	3000 L/M	180 Kg

- Failure to maintain the minimum requirement Fire chief will take appropriate action.

#### 5.4.6 Staffing

- Alula International Airport has a staff establishment of (50) trained airport firefighters including support and administrative staff. It is divided into an administration section and four (4) operational shift, which are designated as “1, 2,3 and 4”.
- Fire Rescue Services (RFFS) administration consists of the following personnel:
  - Fire chief
  - Training Fire Officer
  - Prevention Fire Officer
- The operational consist of the following personnel:
  - Station Captain (1)
  - Crew Chief (2)
  - Airport Firefighters (7)
  - Alarm Room Operator (1)
  - Paramedic (1)
  - Ambulance Attendants (0)
- A total of (12) staff are on (2) duty shifts, and other (2) duty shifts total are (11) staff, one without (Airport Firefighter), and other without (Paramedic) but with (Ambulance Attendants).
- All RFSS personnel meet the required medical standards.

#### 5.4.7 Priority of emergency traffic.

- Not applicable

#### 5.4.8 Response Times

- The level of aircraft fire protection coverage shall be equivalent to GACAR 139 and the International Civil Aviation Organization (ICAO) requirements. The desired response time of two (2) minutes and not to exceed three (3) minutes has been established for the first responding firefighting truck with a rated discharge of at least fifty percent (50%) of the agent discharge required for GACAR 139 and an ICAO Category 7 Airport, to reach the end of runway, as well as to any other part of the movement area in optimum visibility and surface conditions. Any other vehicles required to deliver the amounts of extinguishing agents specified in Table M2 GACAR PART 139 – certification and operations: aerodromes should arrive not more than one (1) minute after first responding vehicle(s) to provide continuous agent application.

#### **5.4.9 RFFS Personnel Extraneous Duties**

- Full-time RFF personnel, where provided, may be assigned other duties, provided that the performance of these duties does not impair their ability to respond immediately to an emergency. These subsidiary duties could include VIP or Refueling standby. Other extraneous duties such as fire prevention inspections, or other functions carried out by fire Fighting Crew. a crew assigned to subsidiary duties should travel in the RFFS vehicle to which they are appointed, maintaining constant contact with the fire station by radio.

#### **5.4.10 Specialist equipment**

- Mini pumper
- Water tanker
- Light rescue Truck
- Mobile floodlight trailer
- Portable fire pump

#### **5.4.11 Mutual Aid Agreement.**

- Mutual aid agreements have been concluded with agencies involved in the airport emergency plan.

#### **5.4.12 Personnel Training**

- The Alula International Airport RFFS Training officer conducts training for all its employees to ensure their proficiency in carrying out their designated duties. Training is broadly carried out as initial and recurrent training throughout the year. The list of subjects and frequency of training is determined in the annual training program as shown below. Individual firefighters maintain a personal training record that documents all the subjects for which each has been trained.
- Details of the training can be found in Alula International Airport - RFFS SOPs and RFFS training program, including that:
  - Realistic fuel fire training
  - Breathing apparatus training

- First aid
- Health and safety policy
- Personal protection equipment
- low visibility procedures (LVP)
- any legal requirements

#### **5.4.13 Structural Fire**

- Alula International Airport -RFFS provide structural rescue and firefighting other than aircraft rescue and firefighting.
- Structural fire includes all fires on the airport except those involving an aircraft. An Alert 4- Foxtrot will be activated in the event of a structural fire. It is possible that the building occupants are being evacuated to escape from the harmful effects of the fire.
- Details of the structural response procedures can be found in Alula International Airport - RFFS SOPs.
- Reference; AEP, - structural fire, chapter (3) Section (4)

#### **5.4.14 AIRCRAFT ACCIDENT OFF AIRPORT**

- In the event of an aircraft crash in the immediate vicinity of the airport, Alert (3) is activated and the airport fire rescue services will respond to the aircraft through the emergency gates (Crash Gate) to extinguish the aircraft fire immediately and start rescue efforts.
- In the event of the arrival of the civil defense crews, the civil defense officer will assume the role of the on-scene commander at the Mobile Command Post.
- There are (2) Crash gates located on surrounding security fence, two of them are located at the beginning and the end of runway.
- Reference; AEP, - Aircraft Accident off airport – Chapter (4)

#### **5.4.15 Additional water supplies**

- The airport has (2) water tank next to fire station area and the capacity of tanks is about (14,4000 L).
- The water pressure available at the fire water hydrant 5 to 7 bars.

#### **5.4.16 Low visibility procedures (LVP)**

- During periods of Low Visibility, Alula International Airport RFFS will continue to provide service to the Airport. Response times will be affected due to the inability of RFFS

crews to operate RFFS vehicles at normal emergency response speeds. RFFS crew safety will not be compromised by operating RFFS vehicles at inappropriate speeds during responses' while visibility is adversely affected by weather conditions at Alula International Airport.

- Details of the RFFS low visibility procedures can be found in Alula International Airport - RFFS SOPs.

## 5.5 Inspection of the movement area

### 5.5.1 Contact details of responsible persons

The contact details for all persons involved in operational and safety functions are listed in Appendix B of this Manual.

### 5.5.2 Purpose and scope

- 5.5.2.1 The purpose of this subpart is to ensure that the movement area and the OLS are inspected to ensure that regulation requirements are being maintained. This procedure applies to all staff involved in these specific inspections of ALULA International Airport .
- 5.5.2.2 This procedure defines the extent, frequency and timing of routine inspections as well as the extent of non-routine inspections of:
- a. All movement area surfaces and sand areas;
  - b. The aerodrome ground lighting system, i.e. approach, runway, taxiway and apron lighting; and
  - c. Temporary obstacles and obstacle lighting, both on and off the airport including on airport buildings such as hangers.
- These procedures are based on:
    - a. Arrangements for carrying out inspections;
    - b. Arrangements and means of communicating with FRCC during an inspection;
    - c. Arrangements for keeping an inspection logbook;
    - d. Details of inspections and interval times;
    - e. The use of inspection checklists; and
    - f. Arrangements for reporting the results of inspections and for taking prompt follow-up actions to ensure the correction of unsafe conditions.

### 5.5.3 Persons responsible

- 5.5.3.1 The Operations Department has overall responsibility for this subpart however, Operations Officers, maintenance Department, Airport Duty Manager and FRCC are directly involved in the inspection process depending on the level of inspection as described below.
- 5.5.3.2 Operational staff provide 24 hours' coverage to ensure continuous monitoring of the airport movement area and OLS on airside. All inspections are conducted using inspection checklists. The checklists are provided in SOP\_OEAO ADM\_01\_005, Inspections of the Movement Area, which also details a 3-level inspection program and the process for implementing and recording the results of inspections.

#### **5.5.4 Routine inspections**

- 5.5.4.1 Inspections shall only be conducted by suitably trained and competent staff.
- 5.5.4.2 In order to ensure that the highest standards of safety are maintained, routine inspections are distinguished into three levels:
- 5.5.4.2.1 Level-1: Regular Inspections;
  - 5.5.4.2.2 Level-2: Detailed Inspections;
  - 5.5.4.2.3 Level-3: Audits.
- 5.5.4.3 Level-1 regular inspections are designed to provide an overview of the general condition of all movement areas and facilities as per GACAR part 139 requirements. Regular inspections are performed by the Airside Operations Officers liaison through FRCC.
- a. **Runways** - Runway inspections cover all the paved areas for damage/ wear and cleanliness, runway lighting, PAPI, ILS critical areas, strips, Runway End Safety Area (RESA), wind direction indicators, obstructions possibly infringing the approach, take-off and transition surfaces and bird concentrations. Runway lighting is inspected for failed, damaged, obscured or dirty light fittings and major misalignments. The vehicle performing runway inspections shall be in contact with FRCC while driving on the maneuvering area. If during an inspection FRCC requests the inspection team to clear the runway, the vehicle must move outside the runway strip before advising FRCC that they are clear. The inspection team must then remain outside the runway strip while awaiting re-entry instructions. The inspection team should never enter the ILS critical area without prior notification of FRCC.
  - b. **Taxiways and Aprons** - Taxiway and apron inspections cover all the corresponding paved areas for damage/ wear and cleanliness, lighting, taxiway strips and possible obstructions. The taxiway and apron lighting system is inspected for failed, damaged, obscured or dirty light fittings and major misalignments.
  - c. **Unpaved areas** - The inspection of sand areas relates to those close to the edges of the movement area and close to signs and other visual aids to ensure they are not obscured.
- 5.5.4.4 In relation to the frequency of Level-1 inspections, all facilities at ALULA International Airport are subject to:
- 5.5.4.4.1 **Runway Inspections** - The inspections will be carried out with at least one inspection as follows (local times): (SOP\_OEAO\_ADM\_01\_005) Inspection of the Movement Area.
1. N1 - Morning inspection -0500 hours- 0600 hours daily.
  2. D1 - Daylight Inspection – between 1200 hours and 1500 hours daily.
  3. N1 - Night inspection – between 2300 hours and 0400 hours daily.
  4. Another inspection will be conducted during each shift as required but normally outside the hours of the above inspections;
- 5.5.4.4.2 **Taxiway Inspections** - The taxiways will be inspected at least once per shift, normally at the commencement of each shift (i.e. three times per

24-hour period). The night inspection of the taxiways may be completed between last light and 2300 hours. The taxiways will generally be monitored continuously throughout each shift;

5.5.4.4.3 **Apron Inspections** - The aprons will be inspected at least once per shift, normally at the commencement of each shift. The apron areas will generally be monitored continuously throughout each shift;

5.5.4.4.4 **Aerodrome Unpaved areas** - These areas will be inspected at least weekly;

5.5.4.4.5 **Aerodrome Beacon (ABN)** - This will be inspected at least daily;

5.5.4.4.6 **OLS Inspections** - The obstacle limitation surfaces shall be inspected for new obstacles during the daylight runway inspection. The approach, take-off and transitional surfaces shall be inspected at the same time as the daylight runway inspection. The other OLS Surfaces shall be inspected at the completion of the daylight runway inspection. Obstacle lights shall be inspected once per 24-hour period after last light except obstacle lights installed in lieu of obstacle markings as a daytime marking or as stated as a requirement in their approval. These lights shall be inspected once per 24-hour period during daylight hours. Additionally:

1. A table listing all permanent obstacle lights, and the relevant facility owner and contact details is to be maintained by the Airport Operations Supervisor.
2. Details of temporary approved obstacles are recorded on a plan by the Airside Operations Officer. Locations are recorded by flagged numbered pins, with the numbers corresponding to the approval number provided. The copy of the approval supplied is maintained on file by the Airside Operations Officer at least until the obstacle has been removed. Refer also to Part 5, Section 5.13 Obstacle Control for further details.
3. The OLS will be monitored at random times throughout each shift;

5.5.4.4.7 **Other Inspections** - Other inspections are to be carried out as required by specific SOPs or at the request of FRCC. Such inspections include runway friction and water depth measurements. SOP\_OEAO\_ADMIN\_01\_012, Friction Testing and SOP\_OEAO\_ADMIN\_01\_013, Rubber Removal Prevention Program provide frequency details and the processes involved in undertaking these specific tasks and the actions required to be communicated to key identified stakeholders. Other inspections may be required by events such as, but not limited to:

1. Adverse weather,
2. Aircraft incidents,
3. Reported or suspected Foreign Object Debris (FOD), or
4. Increased bird activity.

5.5.4.5 Level-2 inspections are more detailed checks of the condition of the movement area and its associated facilities. The Level-2 inspections are performed simultaneously by both, the Operations Officers and the maintenance Department. Detailed inspections are coordinated with FRCC.

- 5.5.4.6 For the Level-2 detailed inspections, the airside area is divided into a specific number of zones. One zone is inspected in detail each day resulting in a process cycle.
- 5.5.4.7 Level-3 audits are essentially an audit of the Level-2 detailed inspections. All such inspections are performed by the Airport Duty Manager and maintenance department accompanied by FRCC. Level-3 audits are carried out four times per year at a period when the impact on the aeronautical activity of ALULA International Airport expected to be minimal. The audit team is to record and report their findings to all relevant stakeholders.
- 5.5.4.8 Sweeping of runways, taxiways and aprons.  
Sweeping of the movement area is done on a need basis to remove dust, sand and other debris. The aerodrome maintenance manager the persons responsible for initiating sweeping operations.  
Please refer to  
[SOP\\_OEAO\\_ADMIN\\_01\\_005 – Inspection of movement Area](#)  
[SOP\\_OEAO\\_ADMIN\\_01\\_009 - Apron maintenance](#)

### **5.5.5 Non-routine inspections**

- 5.5.5.1 The operation supervisor may contact the Airside Operations Officer and immediately request an inspection when a problem with any part of the maneuvering area has been reported or become apparent.
- 5.5.5.2 The Airport Duty Manager is to order an inspection for the following reasons (list not exhaustive):
  - 5.5.5.2.1 Debris is reported on the movement area surfaces;
  - 5.5.5.2.2 A problem is reported with the movement area surfaces or the associated signs, markings, lighting or visual aids;
  - 5.5.5.2.3 After an incident or accident prior to the runway, taxiway or, apron being returned to use;
  - 5.5.5.2.4 There has been an incident or accident in which the condition of the movement area surfaces or the associated signs, markings or lighting could be a causal factor (i.e. requiring reporting to GACA aviation standards);
  - 5.5.5.2.5 Any works on or adjacent to the movement area surfaces are completed;
  - 5.5.5.2.6 A deterioration in the weather has forced the implementation of low visibility procedures; and
  - 5.5.5.2.7 An adverse natural phenomena has occurred.

### **5.5.6 Communications**

- 5.5.6.1 Before commencing an inspection on the maneuvering area, FRCC shall be informed on the appropriate frequency. A listening watch must be maintained throughout the inspection. Once the runway or the strip has been vacated, either at the completion of the inspection or when instructed

by FRCC, a ‘Runway Vacated’ or ‘Taxiway Vacated’ call shall be made on the Tower frequency. When moving on to an apron under the control of a different frequency, a call shall be made when leaving one frequency and when joining another.

- 5.5.6.2 While operating on runways, radio communications must be established with FRCC via the appropriate operational radio frequency.

### **5.5.7 Inspection records**

- 5.5.7.1 Each inspecting Officer (i.e. Operations Officer) is to record the time and the result of the inspection on the relevant Shift Activity Log. Inspections with no adverse findings shall be recorded as “All satisfactory”, or similar wording. Any issue identified during the course of an inspection, which is considered to potentially affect flight safety, is notified immediately to the Airport Duty Manager for onward notification to FRCC and GACA aviation standards. In the event that the inspection report identifies a deficiency that affects or changes the operational status of any part of the aerodrome, the Airport Duty Manager notifies the relevant departments (i.e. ALULA International Airport Maintenance) as required.
- 5.5.7.2 Inspection reports are filled out upon completion of every aerodrome inspection. Inspection records (including all completed checklists) are maintained by the ALULA International Airport Operations Supervisor. SOP OEAO ADM\_01\_007, Maintaining a Logbook, Reporting of Results of Inspections applies as this SOP describes the requirements for maintaining the results of Inspections of the Movement Area by means of a logbook.
- 5.5.7.3 Any adverse inspection findings are reported to the Airport Duty Manager by the Airside Operations Officer as soon as the inspection is completed. This is achieved by completing a non-compliance and corrective action report in accordance with SOP OEAO \_ADM\_01\_011, Non Compliance and Corrective Action Reports. This SOP identifies the overall process by which a corrective action plan is developed and communicated. The Operations Supervisor shall ensure that all necessary actions are taken to ensure that the aerodrome is maintained in a safe condition for aircraft operations, including, but not limited to:
- 5.5.7.3.1 Requesting that an appropriate NOTAM be issued;
  - 5.5.7.3.2 Ensuring appropriate unserviceability markings and lights are displayed, or
  - 5.5.7.3.3 Removing unserviceable facilities from use by aircraft.

## **5.6 Maintenance of the movement area**

### **5.6.1 Purpose and scope**

- 5.6.1.1 The purpose of this subpart is to detail the particulars for the maintenance of the movement area including the arrangements for maintaining the paved areas, runway and taxiway strips and aerodrome drainage.
- 5.6.1.2 Maintenance of the movement area is either pre-scheduled as part of a preventative and routine maintenance plan or conducted in emergency-type situations. SOP\_OEAO\_ADM\_01\_006, Routine Maintenance and Emergency Maintenance describes the process for carrying out routine maintenance and emergency maintenance during or outside the normal operating hours of ALULA International Airport . This SOP includes the movement area within its scope.

### **5.6.2 Persons responsible**

- 5.6.2.1 ALULA International Airport maintenance department is responsible for the routine repair and maintenance of the pavements, strips and drainage system. This also includes attending to immediate civil works relating to reported problems along with providing and applying paint for runway and taxiway markings.

### **5.6.3 Paved areas maintenance**

- 5.6.3.1 The movement area consists mainly of concrete pavements in the apron areas. Runways are flexible pavement and taxiways are flexible/ rigid pavement. The vehicular lanes are mostly asphalt pavements.
- 5.6.3.2 The flexible paved areas are re-surfaced generally once every five to seven years. The rigid pavements when showing signs of distress have a bituminous layer applied over the top. However, for apron areas, the concrete is generally replaced. The joints between the concrete panels in the apron areas/ taxiing path are replaced by a joint filling compound once a year.
- 5.6.3.3 The arrangements for maintaining the paved areas include:
  - 5.6.3.3.1 Annual procurement action for paints, sealing compound, bitumen and aggregates;
  - 5.6.3.3.2 Whenever any patch repair is required for bituminous work, departmental staff are engaged for immediate rectification; and
  - 5.6.3.3.3 The availability of tools and plant (e.g. trolleys, road rollers, bituminous mix and other supplies) required for patch work are available to ALULA International Airport Maintenance are generally carried out through contracts whereas departmental staff carry out patch repair works. The joint filling work in the apron areas is carried out through a contract.
- 5.6.3.4 Since no unpaved runways and taxiways are available at ALULA International Airport , specific arrangements for maintenance work are not applicable.

### **5.6.4 Drainage maintenance**

- 5.6.4.1 Most of the drains of ALULA International Airport are paved. Some of the non-standard drains are improved with lining and the drains are

cleaned once a year. SOP\_OEAO ADM\_01\_018, Drainage System Maintenance and Adequacy defines the requirements for the maintenance of the airfield drainage system to ensure it is adequate in meeting the operational demands of preventing ‘standing water’ in the maneuvering area.

### **5.6.5 Strips maintenance**

- 5.6.5.1 The ALULA International Airport maintenance department is also responsible to ensure that runway and taxiway strips are maintained regularly through the deployment of manpower and machinery for grass cutting. Grass cutting is a preventative measure to minimize seeding and the attraction of wildlife such as birds. Attention is also given to emergency grading of strips which could be required due to wash-out after heavy rains or erosion.
- 5.6.5.2 Minor day-to-day maintenance activities may be carried out with minimal impact on operations if only light portable hand held equipment or hand tools are required. Appropriate precautions are to be taken and workers are permitted to work within the runway graded strip (along the sides but not at the ends of the runway), up to the runway edge during aircraft operations, provided the recall time is no more than two minutes.

### **5.6.6 Coordination measures**

- 5.6.6.1 ALULA International Airport Maintenance, including electronics/communication section staff (or persons of the agencies engaged by them) will from time to time enter active parts of the maneuvering area, subject to notification from FRCC. Individuals carrying out such duties must comply with rules concerning the control of vehicles on the maneuvering area and radio communication protocols.
- 5.6.6.2 The coordination of maintenance works on the movement area may also be required subject to runway friction testing and the completion of water depth measurements. SOP\_OEAO ADM\_01\_012, Friction Testing and SOP\_OEAO ADM\_01\_013, Rubber Removal Prevention Program provide details on the processes involved in undertaking these specific tasks on the maneuvering area and the actions required to be communicated to key identified stakeholders.

### **5.6.7 Fault reporting**

- 5.6.7.1 A fault in the context of aerodrome reporting relates to a failure of an operational asset or piece of equipment/ infrastructure that is critical in terms of the safety of aircraft operations and operational efficiency.
- 5.6.7.2 All faults are to be reported directly to the ALULA International Airport maintenance contractor via appropriate communication. Such faults would normally be initiated by the lead Operations Officer as they would predominantly either affect or potentially affect the safe movement of aircraft. Additionally, for urgent faults such as lighting failures, the fault may be reported verbally to the airfield ground lighting team or the operations Contract Supervisor for rectification. All faults reported are to include, but not be limited to the following:
  - 5.6.7.2.1 Description of the fault;
  - 5.6.7.2.2 Location of the fault;
  - 5.6.7.2.3 Person reporting the fault;

- 5.6.7.2.4 Contact number for the person reporting the fault; and
- 5.6.7.2.5 A reference number for the fault (automatically generated).
- 5.6.7.3 Once the information is received, either from the Operations Officer, the maintenance contractor assigns a priority to the fault based on the information available.
- 5.6.7.4 The maintenance contractor will identify the relevant area/Supervisor/department that will be responsible for the fault management. The maintenance contractor will assign for rectification of faults/corrective action.
- 5.6.7.5 The maintenance of “Markings” are covered in the Visual aids paragraph 5.8.

## **5.7 Sand/dust a, and other hazardous meteorological conditions**

During sand, dust ALULA International Airport follow 5.16 Low visibility operations.

## **5.8 Visual aids**

### **5.8.1 Contact details of responsible persons**

- 5.8.1.1 The contact details for all persons involved in operational and safety functions are listed in Appendix B of this Manual.

### **5.8.2 Purpose and Scope**

- 5.8.2.1 The purpose of this subpart is to detail the procedures for the inspection and maintenance of aeronautical lights (including obstacle lighting), signs, markers, and aerodrome electrical systems including secondary power supplies. Inspections occur during and outside the normal hours of aerodrome operation.

### **5.8.3 Persons responsible**

- 5.8.3.1 ALULA International Airport’s maintenance contractor is responsible for civil and electrical engineering works projects as well as the maintenance of lighting and electrical systems at the Airport. Maintenance contractor ensures that arrangements for urgent civil and electrical repairs to the operational facilities exists at all times.
- 5.8.3.2 The maintenance contractor has the responsibility for ensuring that inspections are carried out as scheduled specific to visual aids, electrical systems and aerodrome lighting. This involves checking the serviceability of essential power supply for the following:
  - 5.8.3.2.1 Approach lighting system;
  - 5.8.3.2.2 Runway/ Taxiway lights;
  - 5.8.3.2.3 PAPI;
  - 5.8.3.2.4 Apron pylon/ Flood lighting;
  - 5.8.3.2.5 Obstacle lights on Hangars/ Buildings (on and off-airport);

- 5.8.3.2.6 Perimeter/ Access gate lighting;
  - 5.8.3.2.7 Aerobridges and docking systems; and
  - 5.8.3.2.8 Mandatory information sign board lights.
- 5.8.3.3 The ALULA International Airport maintenance contractor is responsible for the maintenance of markings in the movement area. The maintenance schedule (subject to significant changes in aircraft movements and any operations requests) is appended below:

**Runways:**

- a. Center Line 3-4 times a year
- b. Threshold once a year
- c. Displayed Threshold once a year
- d. Designation 1-2 times a year
- e. Edge Lines 1-2 times a year
- f. Touch Down Zone 2-3 times a year
- g. Aiming point 2-3 times a year

**Taxiways:**

- 5.8.3.3.1.1 Center Line 1-2 times a year
- 5.8.3.3.1.2 Taxiway stripe marking

**Aprons:**

- 1. Guidelines 1-2 times a year
- 2. Vehicular Lanes 1-2 times a year

#### **5.8.4 Routine inspections (serviceability)**

- 5.8.4.1 Any aerodrome light outage detected is to be fixed as soon as practicable. A light is deemed to be on outage when the main beam is out of its specified alignment or when the main beam average intensity is less than 50 per cent of the specified value.
- 5.8.4.2 The specifications must be used as triggers for NOTAM action to advise pilots of an actual outage, unless the outage can be rectified before the next period of use. SOP\_OEAO\_ADM\_01\_006, Routine Maintenance and Emergency Maintenance - Airfield Lighting, Electrical, Signs and Markings. The SOP\_OEAO\_ADM\_01\_005 Inspection of Movement Area, provides an inspection testing schedule for airfield lighting (and related electrical, signs and markings components).
- 5.8.4.3 A flashing or occulting light is deemed to be on outage when:
  - 5.8.4.3.1 The light ceases to flash;
  - 5.8.4.3.2 The frequency and/ or duration of flash is outside the specified range by a factor of 2 to 1 or greater; or
  - 5.8.4.3.3 Within a 10-minute period, more than 20% of flashes fail to occur.
  - 5.8.4.3.4 A lighting system is deemed to be on outage when:
    - 5.8.4.3.5 In the case of a lighting system comprising 4 lights (e.g. PAPI, wind direction indicator lights or runway guard lights), more than 1 light is on outage;

- 5.8.4.3.6 In the case of a lighting system comprising 6 to 13 lights (e.g. threshold lights), more than 2 lights are on outage, or 2 adjacent lights are on outage; or
- 5.8.4.3.7 In the case of a lighting system comprising more than 13 lights, more than 15% of the lights are on outage, or two adjacent lights are on outage.
- 5.8.4.4 The Airport Operations Officers carry out daily visual inspections in accordance with SOP\_OEAO\_ADMIN\_01\_005, Inspections of the Movement Area to monitor and report faults or damage that affect the serviceability of aerodrome.
- 5.8.4.5 Faults or damage to the aerodrome lighting systems identified by Operations Officers are reported to maintenance contractor. The maintenance contractor enters details of the reported fault into the maintenance management system. The maintenance contractor then refers the matter on to the appropriate parties for action.
- 5.8.4.6 The maintenance contractor carries out daily serviceability inspections (using checklists from SOP\_OEAO\_ADMIN\_01\_005, Inspections of the Movement Area) and maintenance of ground lighting facilities as per the following schedule:
  - a. Morning Inspection: 0700 to 800 Daily
  - b. Afternoon Inspection: 1100 to 1200 Daily
  - c. Night Inspection: 2000 to 2100 Daily
- 5.8.4.7 The Maintenance contractor will inspect lighting system for the Aircraft parking stands, taxiway, and ground lighting facilities of runway such as PAPI lights, runway end lights, and runway edge lights. After sunset a visual check of lighting vault and equipment which feed the RWY, TWY and apron lighting is carried out
- 5.8.4.8 SOP\_OEAO\_ADMIN\_01\_008, Aerodrome Signs and Markings provides details on the various signs and markings and their required maintenance on the movement area. This SOP aligns with the provisions of ICAO Doc 9157 Part 4, Visual Aids and ICAO Doc 9137, Airport Maintenance Practices.

### **5.8.5 Routine maintenance (performance and technical inspections)**

- 5.8.5.1 ALULA International Airport's maintenance contractor is responsible for the Performance and Technical Inspections (P&TI) for aerodrome lighting including apron floodlighting.
- 5.8.5.2 ALULA International Airport's maintenance contractor is required to perform planned P&TI in accordance with the checklists generated by the maintenance management system for each work order and job plan.
- 5.8.5.3 Any deficiencies identified during the P&TI are rectified at the time of inspection by the ALULA International Airport's maintenance contractor. This will only occur if the deficiencies are considered minor and there is sufficient time available. If the deficiencies identified during the P&TI cannot be rectified within the available time a follow-up repair is recorded in the maintenance management system by the maintenance contractor.
- 5.8.5.4 The maintenance contractor is responsible for the technical inspections for apron floodlighting.
- 5.8.5.5 The technical inspections for each type of apron floodlighting system are planned and conducted at the frequency specified in the preventive maintenance schedule. This excludes lux level testing. Maintenance

- contractor is to perform the technical inspections in accordance with the schedules and checklists generated from the maintenance management system.
- 5.8.5.6 Maintenance contractor is responsible for the P&TI for standby power.
  - 5.8.5.7 The inspections for each type of standby power system are planned and conducted at the frequency specified in the preventative maintenance schedule. The maintenance contractor shall perform the inspections in accordance with the schedules and checklists generated from the maintenance management system.
  - 5.8.5.8 The P&TI for airfield lighting is to be recorded in the maintenance management system by maintenance contractor. A logbook recording details of routine inspections and maintenance of airfield lighting systems is kept in the Airport maintenance office.
  - 5.8.5.9 The apron floodlighting and standby power technical inspections are to be recorded in the maintenance management system by maintenance contractor.
  - 5.8.5.10 Notification of faults usually comes directly to the operation department from FRCC or the Operations Officer. The level of priority for follow up repairs of faults is determined by maintenance contractor and may be pre-determined depending on the nature of fault.
  - 5.8.5.11 Maintenance contractor is to carry out the follow-up repairs of faults notified to them. The repairs carried out are recorded in the maintenance management system. The level of priority for follow up repairs of faults is determined by Airport's maintenance contractor. All outstanding faults are reviewed through a backlog report.
  - 5.8.5.12 The Airport director is responsible for maintaining airport plan records of all electrical facilities, reticulation and control cables provided for aircraft operations. Airport director is responsible for maintaining and updating plans for all ALULA International Airport's electrical facilities and electrical and communication reticulation diagrams.
  - 5.8.5.13 Amendments to the existing electrical infrastructure that have been carried out are to be kept by the airport director for appropriate action. These amendments may be as a result of capital works and rely on the supply of as-built information relating to these works.

### **5.8.6 Light switching**

- 5.8.6.1 The arrangements for switching airfield lights on or off, is controlled by FRCC or by operation in charge. In the event of a switching failure when FRCC or operation in charge cannot switch airfield lights on or off, local control can be established by a duty representative of the Airport Lighting section or through the control system.
- 5.8.6.2 ALULA International Airport's director is to ensure that projects, involving lighting systems, are not put into service unless they have been flight checked, checked by trained electrical staff and surveyed by an appropriate person. The kinds of lighting systems requiring ground and flight checks are:
  - 5.8.6.2.1 Approach lighting systems;
  - 5.8.6.2.2 Runway lighting systems for instrument runways; and
  - 5.8.6.2.3 Precision Approach Path Indicator (PAPI) system.

- 5.8.6.3 The nominated installation contractor is to conduct a ground check of the lighting output prior to commissioning the flight test. If the lighting system is affected by maintenance and requires flight checking, the ALULA International Airport's director is responsible for all arrangements before lighting is put into service. This excludes the actual flight check.
- 5.8.6.4 The contractor appointed to deliver projects involving kinds of lighting systems is to ensure that the use of survey instruments by a registered surveyor is used to check position and orientation of lights to ensure compliance. The contractor is also to prepare a report detailing the checks made and any necessary corrective actions required.
- 5.8.6.5 The flight check is to be performed by a pilot, as having the competency to conduct the flight check, together with the contractor who will be on-site during the flight test to provide the necessary adjustments to the lighting if required.
- 5.8.6.6 Compliance certificates and test results for the light fittings installed, the certified ground check of the installation and/ or flight check reports that confirm that the lighting system is compliant, are to be submitted to the ALULA International Airport's director.
- 5.8.6.7 Maintenance switch rooms have been established to ensure navigational aids serviceability and uninterrupted power supply. Daily routine maintenance work is carried out regarding runway lighting, taxiway lights and apron flood lights. Emergency power supply (diesel generators) are also available for runway, taxiway, approach lights, PAPIs and apron flood lights.
- 5.8.6.8 The switch-over time for the following light installations will be the maximum:
- |           |                                          |      |         |
|-----------|------------------------------------------|------|---------|
| 5.8.6.8.1 | Approach lighting system<br>Max;         | (15) | seconds |
| 5.8.6.8.2 | Visual Approach Slope Indicators<br>Max; | (15) | seconds |
| 5.8.6.8.3 | Runway edge:<br>Max;                     | (15) | seconds |
| 5.8.6.8.4 | Runway threshold:<br>Max;                | (15) | seconds |
| 5.8.6.8.5 | Runway end:<br>Max;                      | (15) | seconds |
| 5.8.6.8.6 | Essential taxiway:<br>Max;               | (15) | seconds |
| 5.8.6.8.7 | Obstacle:<br>Max;                        | (15) | seconds |
- and therefore CATI requirements are fulfilled.
- 5.8.6.9 **When applicable** Maximum power supply switch-over time for available ground-based radio aids are as follows:
- |           |                                   |      |         |
|-----------|-----------------------------------|------|---------|
| 5.8.6.9.1 | ILS localizer (Runway #):<br>Max; | (10) | seconds |
|-----------|-----------------------------------|------|---------|

- 5.8.6.9.2 ILS glide path (Runway #): (10) seconds  
Max;  
And hence also comply with GACA requirements.
- 5.8.6.10 ALULA International Airport's director shall ensure that switch over times are met at the Airport.

### **5.8.7 Emergency maintenance**

- 5.8.7.1 The maintenance contractor provides the emergency response to faults during normal working hours. ALULA International Airport's maintenance contractor provide the emergency response outside normal working hours and determine the priority for each fault as pre-determined.
- 5.8.7.2 SOP\_ OEAO\_ADM\_01\_006, Routine Maintenance and Emergency Maintenance describes the process for carrying out routine maintenance and emergency maintenance during or outside of normal operating hours of ALULA International Airport. This SOP includes the following:
- Description of responsible parties to conduct emergency maintenance
  - Description of the communication protocols to be followed to commence, conduct and conclude scheduled or unscheduled maintenance
  - Process to follow up on regular maintenance findings arising from inspections
  - Process to follow up on emergency maintenance arising from inspections
  - Process to communicate with the operation department for any information requiring immediate dissemination in the event of emergency maintenance to address significant hazards to aircraft operations and the resolution
- 5.8.7.3 In accordance with SOP\_ OEAO \_ADM\_01\_006, *Routine* maintenance and emergency maintenance work is categorized according to this urgency:
- Emergency repairs – a deficiency is identified, and due to its criticality, the repair work must be done immediately; and
  - Repairs – a deficiency is identified, but due to the lack of criticality, the repair work can follow the general maintenance repair procedures, as contained in the airport's maintenance management program.

### **5.8.8 Secondary power supplies**

- 5.8.8.1 The ALULA International Airport maintenance contractor is responsible for the routine preventive maintenance of the standby power facilities. Routine maintenance is performed by the nominated contractor in accordance with a pre-defined schedule.
- 5.8.8.2 Any deficiencies identified during routine maintenance are rectified immediately by the nominated contractor. If the deficiencies cannot be repaired immediately then the contractor is to insert the details for a follow up repair into the maintenance management system and report the deficiencies to the ALULA International Airport's maintenance contractor
- 5.8.8.3 The level of priority for follow up repairs is determined by the ALULA International Airport maintenance contractor after consultation with the Airport director. The Airport director is responsible for auditing routine preventative maintenance conducted by the nominated contractor. The audits include physical checks of standby power facilities and/ or completed work orders in the maintenance management system.

- 5.8.8.4 ALULA International Airport is equipped with a standby power supply through diesel generator sets to ensure an uninterrupted power supply to all navigational aid lights, perimeter lighting and apron flood lighting. Perimeter lighting is provided along the airport perimeter road in the operational area to facilitate the security of the airport. The procedure for serviceability checks of diesel generator sets is as follows:
- 5.8.8.4.1 The Airport maintenance contractor shall carry out weekly operational checks for the serviceability of the diesel generator sets; and
  - 5.8.8.4.2 The Airport maintenance contractor is to ensure that periodical tests and checks, as per prescribed Original Equipment Manufacturers (OEM) recommendations, are completed.
- 5.8.8.5 SOP\_OEAO ADM\_01\_010, Secondary Power Supplies and Total System Failure provides an overview of the ALULA International Airport airfield electrical power system and the redundancy capability designed to prevent a partial or complete system failure. In the event of a total or partial electrical power system failure, this SOP specifies the appropriate communication protocol and those agencies responsible to restore system electrical power with immediacy.

## **5.9 Apron management**

### **5.9.1 Purpose and scope**

- 5.9.1.1 The purpose of this subpart is to provide for the safe and expeditious movement of aircraft and the orderly allocation of aircraft parking positions at ALULA International Airport. Parking positions have been designed and marked to ensure that appropriate separation distances and clearances are in accordance with GACAR part 139 and that aircraft refueling and routine servicing activities can be undertaken without interference to adjacent parked aircraft.
- 5.9.1.2 The scope of the procedures applies to all persons responsible for the procedures and allocation of aircraft parking on the aerodrome.
- 5.9.1.3 These procedures are based on:
  - 5.9.1.3.1 Arrangements between FRCC / operation;
  - 5.9.1.3.2 Arrangements for allocating aircraft parking positions;
  - 5.9.1.3.3 Arrangements for initiating engine start and ensuring clearance of aircraft pushback;
  - 5.9.1.3.4 Marshaling service; and
  - 5.9.1.3.5 FBO Operation

### **5.9.2 Persons responsible**

- 5.9.2.1 The ALULA International Airport FRCC / Operation Supervisor have the overall responsibility for implementing procedures for aircraft parking control. The FRCC / operation is responsible for the day-to-day control and organization of the safe and expeditious movement of aircraft on the apron.
- 5.9.2.2 The primary objective of the FRCC/ operation supervisor shall ensure the safety of aircraft moving on aprons and taxilanes at ALULA International Airport.

- 5.9.2.3 All aircraft require an FRCC/ Operation Supervisor (ground handling agent) clearance before they can make a request for pushback and start.
- 5.9.2.4 The Operation Supervisor shall arrange with ground handling agent and aircraft within their Area of Responsibility (AoR).
  - FRCC are to:
    - 5.9.2.4.1 After pushback and start has been completed, provide taxi instructions for an outbound aircraft and route them to an appropriate handover point.
    - 5.9.2.4.2 After an inbound aircraft has arrived at the AoR, instruct them to an appropriate aircraft stand.
- 5.9.2.5 Since ALULA International Airport is an *uncontrolled aerodrome* then all aircraft must follow the traffic information broadcasts by aircraft (TIBA) procedures and broadcast relevant collision avoidance information to each other. The TIBA procedures are as follows: "as the AIP".

**ALL PILOTS MUST USE THE PUBLISHED TIBA FREQUENCY AND SHALL:**

- a. Maintain a continuous listening watch and broadcast the aircraft's position and intended movements prior to maneuvering the aircraft, as applicable;
- b. Broadcast acknowledgments of any TIBA messages received;
- c. Prior to departure maintain a listening watch for at least five (5) minutes and broadcast taxi movements prior to maneuvering the aircraft;
- d. Broadcast the aircraft's position and intentions before crossing or entering a runway for take-off and again before actually commencing the take-off roll;
- e. Broadcast when the aircraft is airborne and when it leaves the traffic circuit and when it leaves the ATZ; and
- f. Broadcast any other message considered necessary in the interests of safety.

### **5.9.3 Aircraft parking positions allocation**

Procedures for the use of aircraft parking bays at ALULA International Airport are established by the Operations Supervisor and shall be implemented by the operation officer.

- 5.9.3.1 There are two elements to the priority system - allocation based on aircraft type and allocation based on flight profile, i.e. terminating, originating or turnaround. The priority system is to be applied so that:
- 5.9.3.2 Where new aircraft types are planned to operate these details are to be provided to ALULA International Airport director for an assessment of runway, taxiway, apron clearances and weight limitation requirements (IF APPLIES)
- 5.9.3.3 The Operation Supervisor shall complete a daily review of the planned operating schedule prior to the day of operation to ensure all planned movements can be accommodated.
- 5.9.3.4 Aircraft operators carrying explosive cargo shall obtain approval for each consignment of explosives from the Airport Duty Manager prior to the aircraft arriving at ALULA International Airport.
- 5.9.3.5 The Operation Supervisor shall ensure the aircraft is allocated a suitable parking position based on the initial assessment and any possible restrictions.
- 5.9.3.6 The notes for aircraft operating restrictions that apply to the maneuvering area at ALULA International Airport are reflected in the AIP.

- 5.9.3.7 SOP\_OEAO ADM\_01\_016, Restricting Aircraft Operations during Closures shall be followed to restrict aircraft operations at ALULA International Airport during altered aerodrome conditions, including runway and taxiway closures.
- 5.9.3.8 Isolated parking positions for aircraft subject to unlawful interference are to be coordinated with the RSAF.

#### **5.9.4 Engine start and aircraft pushback clearance**

- 5.9.4.1 SOP\_OEAO ADM\_01\_014, Aircraft Engine Ground Running covers engine operating procedures outside of specific engine maintenance activity on the apron areas.
- 5.9.4.2 Aircraft requiring engine start-up and pushback clearance contact the FRCC/ operation in the first instance for initial clearance delivery. The specific aircraft pushback activity is conducted by the ground handling agent.
- 5.9.4.3 The Operation Supervisor establishes the guidelines to ensure aircraft pushbacks are completed as safely as possible. The following is to be considered prior to or during the operation:
  - 5.9.4.3.1 Ground crews (and the ground handling agent) are to ensure areas behind the aircraft are clear, and that the aircraft is positioned in such a way as to avoid concentrating breakaway blast at buildings, parked or taxiing aircraft, vehicles or persons on the apron;
  - 5.9.4.3.2 A pushback is not to commence if it will conflict with another pushback already in progress or with an aircraft that is ready to taxi.
  - 5.9.4.3.3 Vehicle operators should be aware of the dangers associated with passing behind an aircraft being pushed back (i.e. if the aircraft beacon is on then the driver must give way to the aircraft irrespective of its movement at the time);
  - 5.9.4.3.4 The Operations Supervisor shall ensure good cooperation and exchange of information between the FRCC and ground service providers.

#### **5.9.5 Marshaling Service**

- 5.9.5.1 The Operation Supervisor is responsible for ensuring that aircraft operators arrange all marshaling services for aircraft allocated to a parking position. The Operation Supervisor identify each parking position requiring a marshaling service. SOP\_OEAO ADM\_01\_015, Aircraft Marshaling applies to those persons undertaking marshaling activities.
- 5.9.5.2 All marshaling signals given to aircraft must comply with the standard marshaling signals prescribed in SOP\_OEAO ADM\_01\_015, Aircraft Marshalling.

#### **5.9.6 Leader (van)/ Follow me service**

Any driver of a vehicle that has a requirement to move where the driver is not licensed, or the vehicle is not equipped to operate, must request an aircraft marshaling follow-me vehicle from Alula International Airport. A follow-me vehicle should be requested by contacting FRCC, via either radio or telephone. Advance warning must be given to guarantee the availability of the service.

## **5.10 Apron safety management**

### **5.10.1 Purpose and scope**

- 5.10.1.1 The purpose of this subpart shall ensure that activities carried out at ALULA International Airport aprons are not only safe for all workers but also to ensure that the safety of aircraft operations is maintained at all times. The scope of the procedures applies to all persons responsible for undertaking activities on the apron areas.
- 5.10.1.2 These procedures relate to day-to-day operations on the apron with the interface of people, aircraft, vehicles and equipment. Specific requirements include:
  - 5.10.1.2.1 Protection from jet blast;
  - 5.10.1.2.2 Enforcement of safety precautions during refueling operations;
  - 5.10.1.2.3 Apron sweeping;
  - 5.10.1.2.4 Apron cleaning;
  - 5.10.1.2.5 Arrangements for reporting incidents and accidents on the apron;
  - 5.10.1.2.6 Arrangements for auditing the safety compliance of all personnel working on the apron.

### **5.10.2 Persons responsible**

- 5.10.2.1 ALULA International Airport Safety Supervisor also has responsibilities day-to-day (mainly through the operations team) to ensure that activities conducted on the apron are safe. The Operations Supervisor also continuously monitors the apron area to ensure obstacle free of aircraft movements.
- 5.10.2.2 Each airside operating company is obliged to have in place its own safety management system SMS. The terms and conditions of each entity operating at the airport is to include the requirement for those companies to adopt all the principles and practices of ALULA International Airport Airport's SMS.
- 5.10.2.3 Ground handlers, airlines and fuel companies are responsible for their own people and must regularly observe, manage and supervise the safety practices required while operating on the apron. All personnel working on the apron are required to undertake initial safety training together with an ongoing refresher program. The topics to be included, as a minimum, are listed in the subject paragraphs listed within this subpart of the Manual.
- 5.10.2.4 ALULA International Airport Operations Officers conduct routine inspections together with airline operators, fixed-base operators, ground handlers and the refueling companies who also monitor their own employees' activities on the aprons.

### **5.10.3 Apron safety principles**

- 5.10.3.1 There are a large number of activities taking place on ALULA International Airport aprons, frequently within a congested and time-sensitive environment. The general principles of Workplace Health and Safety apply to aprons as a workplace, but with additional factors specific to airport aprons and ground handling of aircraft, including types of accidents, incidents, and other occurrences.

- 5.10.3.2 The airport community, under the leadership of the airport director (i.e. delegated to ALULA International Airport Safety Supervisor), should carefully examine all safety issues and implement corrective measures in a timely manner.
- 5.10.3.3 Aircraft parking stands have been designed and marked to ensure that appropriate separation distances are maintained and that aircraft refueling, and servicing activities can be undertaken without interference to adjacent parked aircraft.

#### **5.10.4 Jet blast protection**

- 5.10.4.1 Jet blast is the exhaust produced by jet engines while in operation. The forces of the exhaust vary with the size of the engine and power setting at which the engine is being operated, but they can produce very high temperatures and velocities. Aircraft manufacturers provide information on the exhaust velocities and temperatures for their respective aircraft and engine combinations. High Jet blast velocities can lead to loose objects becoming airborne. These objects have a great risk of leading to injury of personnel and damage to airport equipment, facilities, and pavement.
- 5.10.4.2 Personnel working on the apron are to be trained in situational awareness to address issues such as the potential impacts of jet blast. Aircraft operators are to ensure that they follow the procedure for engine start-up and taxiing on the apron areas. The intent is to mitigate the potential effects of jet blast on personnel, equipment, and buildings. Mitigation measures including the use of blast fences, specific engine run up procedures, and blast pads are required. Foreign Object Debris (FOD) mitigation procedures are also required to assist in the prevention of jet blast related incidents.

#### **5.10.5 Refueling operations and associated safety precautions**

- 5.10.5.1 Fueling procedures for aircraft are technical and detailed. Fueling can occur from fuel tankers. At ALULA International Airport it is prudent to ensure that some fuel tanker capacity is retained as this will be required if it becomes necessary to defuel an aircraft for any reason.
- 5.10.5.2 Fueling cannot be performed within hangers
- 5.10.5.3 The key points to be considered for safe fueling procedures include:
  - 5.10.5.3.1 A single person (competent refueled) shall be in charge of the fueling process. That person should be trained and licensed in accordance with GACA Regulations and JIG standards;
  - 5.10.5.3.2 All staff in the vicinity of the fueling operation are to be trained in the operation of any hydrant emergency shut-off system and appropriate firefighting equipment;
  - 5.10.5.3.3 The aircraft must be chocked;
  - 5.10.5.3.4 All hoses used in fueling should be electrically bonded;
  - 5.10.5.3.5 Personnel must not be able to generate sources of ignition accidentally;
  - 5.10.5.3.6 Equipment used must be intrinsically safe;
  - 5.10.5.3.7 Escape routes for staff, passengers and vehicles must be free of obstructions;

- 5.10.5.3.8 APUs and GPU must not be started during fueling;
- 5.10.5.3.9 A fueling safe zone must be established (a minimum radius of 3 meters is recommended) around the aircraft fueling receptacles, fuel vents and fueling equipment within which the use of Portable Electronic Devices (e.g. mobile telephones, handheld radios, pagers, photographic flash bulbs or electronic flash equipment), as well as other sources of ignition or fire are prohibited. Where passengers are boarding or deplaning during refueling, the fueling safety zone should be avoided and their movement should be under the supervision of an airline representative.
- 5.10.5.3.10 Entry and exit points for fuel trucks must be left clear at all times during aircraft fueling.
- 5.10.5.4 Fueling activities are to be included in apron safety awareness training for all staff and especially in driver training to make staff aware of the risks associated with high-pressure hoses delivering fuel to the aircraft from fuel hydrants and the presence of the electrical bonding wire.
- 5.10.5.5 Aircraft must not be defueled when passengers remain on board or are boarding or deplaning. The normal surge tanks and automatic shut-off features of the fueling process are not incorporated in the de-fueling systems on aircraft.
- 5.10.5.6 Spillages during fueling operations can occur and a procedure to absorb the spilt fuel followed by proper disposal is specifically addressed within ALULA International Airport International Airport's Airport Emergency Plan (AEP).
- 5.10.5.7 At ALULA International Airport, an absorbent material shall be used to soak up the fuel and ensure correct disposal. A requirement exists for those involved to report all spillages to the operations for the initiation of follow-up action. Those responsible for the spill should be given the opportunity to proceed with containment, clean up and disposal.

## **5.10.6 Apron cleaning and sweeping**

- 5.10.6.1 Sweeping and cleaning of the aprons is completed by ALULA International Airport Maintenance or appointed third party contractors. Particular care and attention should be given to work sites and any contractor compounds. Joint airline, and handling agent FOD walks should be undertaken to jointly check the amount of FOD on the apron areas and also to jointly try to identify its sources.
- 5.10.6.2 Sweeping plans are required and regularly reviewed by ALULA International Airport Operations Supervisor to ensure that the frequency certain operational surfaces are being swept is appropriate to avoid critical accumulation of dust or debris (i.e. from construction areas) that may impair the safety of aircraft operations. SOP\_OEAO\_ADMIN\_01\_009, Cleaning and Sweeping of the Apron applies in terms of the processes involved in undertaking such tasking.

## **5.10.7 Apron incident and accident reporting**

- 5.10.7.1 When accidents, incidents and occurrences take place on the apron, then the operation is to be notified in the first instance. Processes are to be in place to deal with the aftermath and effects such as:
  - 5.10.7.1.1 Reporting of the occurrence;

- 5.10.7.1.2 Recording all the pertinent details to enable any subsequent investigation;
  - 5.10.7.1.3 Ensuring the presence of emergency services, if required;
  - 5.10.7.1.4 Establishing safe temporary closures of the area affected;
  - 5.10.7.1.5 Cleaning up and returning the area to service; and
  - 5.10.7.1.6 Communicating with other airport users.
- 5.10.7.2 All persons working on the apron are to report accidents, incidents and occurrences in a timely manner. Non-punitive reporting is encouraged. All reportable accidents/ incidents/ occurrences are to be immediately notified to the ALULA International Airport's Director together with the President of GACA and Aviation Investigation Bureau (AIB) as appropriate if an aircraft is involved.
- 5.10.7.3 In accordance with GACA Regulation Part 4 Mandatory Reporting of Accidents, Incidents and Statistics, there are specific requirements for ALULA International Airport to report aircraft accidents and serious incidents as defined in Appendix A to GACAR Part 4. Mandatory and voluntary occurrence reporting are addressed in detail within the ALULA International Airport SMS.

#### **5.10.8 Apron personnel safety compliance auditing**

- 5.10.8.1 ALULA International Airport Operations inspect the safety compliance of all personnel working on the apron on day-to-day basis. This is completed as part of their daily inspection protocols for the apron areas. Conducting regular inspections is a key aspect of ensuring the safety of airside operations.
- SOP\_OEAO ADM\_01\_005 Aerodrome Inspection provide the specific arrangements relating to inspections, reviews and audits relevant to the apron. All airside areas need to be periodically checked to ensure they are serviceable and available for use. Particular attention is to be paid to the aprons, including airside roads. The purpose of such inspections, reviews and audits is to ensure that:
- 5.10.8.1.1 No FOD is present;
  - 5.10.8.1.2 The pavement is not damaged or contaminated with sand or standing water;
  - 5.10.8.1.3 Operators adhere to safe driving and apron safety rules;
  - 5.10.8.1.4 No birds or other wildlife are present (bird and wildlife presence is monitored and controlled);
  - 5.10.8.1.5 The paint markings are visible and correct;
  - 5.10.8.1.6 The signs are visible and correct;
  - 5.10.8.1.7 The apron lighting is serviceable;
  - 5.10.8.1.8 Equipment provided is safe for use and serviceable;
  - 5.10.8.1.9 Equipment is only parked and staged in designated areas and does not protrude into the stand safety envelope; and
  - 5.10.8.1.10 Emergency fuel shut-offs are not blocked.
- 5.10.8.2 These inspections are also to be randomly conducted during dark conditions or during adverse weather to check the lighting, signs and markings.

### **5.10.9 Foreign Object Debris (FOD) prevention**

- 5.10.9.1 Debris on the airport presents a hazard to aircraft in a number of ways. Training of all airport staff about the hazards posed by debris is important – this should be incorporated into the process of granting staff airside access. Prevention through training is the first step; however, it is also necessary to have a process to regularly clear parts of the airport of debris, especially the apron areas.
- 5.10.9.2 Removing FOD should be the responsibility of all stakeholders. Aircraft maintenance organizations are to be included in FOD reviews as incidences of tools and chocks accidentally left in aircraft, and which have subsequently fallen out, can become hazardous FOD items.
- 5.10.9.3 FOD bins should not be used for aircraft refuse bags, oil cans or other non-FOD items. Sweeping and cleaning of the aprons completed by ALULA International Airport Maintenance or appointed third party contractors should also pick up smaller items of FOD. SOP OEAO\_ADM\_01\_004, Foreign Object Debris (FOD) control provides practical guidance on FOD control.

## **5.11 Vehicles on the movement area**

### **5.11.1 Purpose and scope**

- 5.11.1.1 The purpose of this subpart is to ensure the control of surface vehicles operating on or in the vicinity of the movement area. The intent is not to jeopardize the safety of aircraft operations and the general working environment through the poor use and management of airside vehicles.
- This procedure applies to all persons involved in the approving and/ or operation of vehicles on the airside of ALULA International Airport. These procedures relate to the day-to-day control of surface vehicles operating on or in the vicinity of the movement area. Specific requirements include:
- 5.11.1.1.1 The traffic rules and means of enforcement; and
- 5.11.1.1.2 The method of issuing driving permits for operating vehicles on the movement area.

### **5.11.2 Persons responsible**

- 5.11.2.1 The ALULA International Airport Safety Supervisor is responsible for the development and implementation of procedures for the control of vehicles entering and operating on the movement area of ALULA International Airport.
- 5.11.2.2 The ALULA International Airport Operation's Supervisor is responsible for ensuring that driver testing and records of persons approved for an authority to drive airside are maintained.
- 5.11.2.3 The ALULA International Airport Operations staff have day-to-day responsibility for ensuring that the movement of persons and vehicles operating in the movement area are in accordance with stated requirements. This includes randomly checking driving licenses, vehicle permits and ensuring that the airside driving rules are applied.
- 5.11.2.4 The ALULA International Airport's Director (on receipt of information from the operation staff) decides which violations and penalty recommendations are to be passed to the defaulter for consideration and potential enforcement action.

### **5.11.3 Applicable traffic rules and their enforcement**

- 5.11.3.1 The following rules apply to all vehicles operating on the movement area of ALULA International Airport as described below. Any driver breaching the following rules shall be subjected to administrative action and/ or a penalty imposed:
- 5.11.3.1.1 Aircraft, including aircraft under tow have right of way at all times;
- 5.11.3.1.2 Vehicle hazard lights are not to be used in normal operations.
- 5.11.3.1.3 Vehicles that enter the movement area must be entering for one of the following reasons after permission from FRCC:
1. Operations related to the turnaround of aircraft;
  2. Operations associated with aerodrome works;
  3. Emergency service vehicles attending an emergency.
- 5.11.3.1.4 No vehicle is to enter an area marked as unserviceable, with the exception of works vehicles that require access.

- 5.11.3.1.5 In low visibility conditions, only authorized parties are to enter the movement area.
- 5.11.3.1.6 All drivers must be aware of the potential presence of FOD. If a driver sees any FOD, the driver must stop and remove the FOD. If the driver is not capable of the removal of FOD, the driver must immediately report this to FRCC /operation to organize removal;
- 5.11.3.1.7 All drivers must be cautious of fuel or oil spills. Vehicles shall never be driven through or near a fuel/ oil spill. Any spill must be reported to FRCC /operation immediately;
- 5.11.3.1.8 The following speed limits apply: 5 kph (within 20 meters of an aircraft or within the aircraft position area); 10 kph (when approaching or moving through security gates); 25 kph (all other areas); and 50 kph (for special marked areas only).
- 5.11.3.1.9 The only exceptions for speeding are for: authorized vehicles acting as part of the AEP/movement area inspection; drivers with direct notification from FRCC /operation.
- 5.11.3.2 Additional requirements apply in accordance with GACAR Part 139 (section 139.59 Aerodrome Vehicle Operations). As such, no person may operate a vehicle:
  - 5.11.3.2.1 On a maneuvering area unless authorized by FRCC ; or
  - 5.11.3.2.2 On an apron unless authorized by ALULA International Airport Operation Supervisor.
- 5.11.3.3 Each driver of a vehicle on the movement area must comply with all mandatory instructions conveyed by markings, lights, and signs unless otherwise authorized by FRCC /operation when on the movement area.
- 5.11.3.4 Each driver of a vehicle on the movement area must be appropriately trained for the tasks to be performed and must comply with the instructions issued by FRCC/operation when on the movement area.
- 5.11.3.5 Each driver of a radio-equipped vehicle must establish satisfactory two-way radio communication with FRCC /operation before entering the movement area. The driver must maintain a continuous listening watch on the assigned frequency when on the movement area.
- 5.11.3.6 Each driver of a vehicle operating on the movement area must:
  - 5.11.3.6.1 Give way to an emergency vehicle; an aircraft taxiing, about to taxi, or being pushed or towed; and
  - 5.11.3.6.2 Give way to other vehicles in accordance with the local rules established by ALULA International Airport International Airport
- 5.11.3.7 A vehicle driver in doubt as to the position of the vehicle with respect to the movement area must immediately:
  - 5.11.3.7.1 Notify FRCC /operation of the circumstances (including the last known position);
  - 5.11.3.7.2 Simultaneously, unless otherwise instructed by FRCC /operation, vacate the runway, taxiway, or other part of the movement area, to a safe distance; and
  - 5.11.3.7.3 Stop the vehicle.
- 5.11.3.8 Aircraft with running engines pose a significant risk. In order to avoid engine/ propeller ingestion or damage due to jet/ propeller blast, the following minimum safe distances must be maintained at all times:
  - 5.11.3.8.1 No presence within 7.5 m of the front of a jet engine;

- 5.11.3.8.2 No presence within 5 m of the front of a propeller;
  - 5.11.3.8.3 No presence within 75 m of the rear of a jet engine running idle;
  - 5.11.3.8.4 No presence within 20 m of the rear of a propeller on idle;
  - 5.11.3.8.5 No presence within 150 m of the rear of a jet powered aircraft that is moving or preparing to move; and
  - 5.11.3.8.6 No presence within 50 m of the rear of a propeller powered aircraft that is moving or is preparing to move.
- 5.11.3.9 The aircraft stand is a high-risk area for vehicle movement due to the proximity of aircraft and the volume of vehicles on the stand. The following rules must be followed by all drivers operating on the aircraft stand. Administrative action and/ or a penalty may be imposed on any driver not following these rules:
- 5.11.3.9.1 Never approach an aircraft with its anti-collision beacon flashing. Drivers must remain stationary until the beacon has stopped flashing and the chocks have been placed. The anti-collision lights may indicate that an aircraft is about to start its engines;
  - 5.11.3.9.2 Never impede a marshaller operator when an aircraft is moving on stand;
  - 5.11.3.9.3 Passengers on the apron have right of way at all times. Vehicles shall never pass between a parked passenger bus and the aircraft;
  - 5.11.3.9.4 Drivers shall not move their vehicles or park within 3 m of an aircraft, unless it is required for aircraft servicing;
  - 5.11.3.9.5 Drivers shall not drive within 15 m of a refueling truck or fuel hydrant when an aircraft is being refueled;
  - 5.11.3.9.6 A safe distance between aircraft engines and vehicles must be maintained at all times.
  - 5.11.3.9.7 Never drive under the wings or fuselage of an aircraft unless authorized to do so;
  - 5.11.3.9.8 When parking, drivers must ensure:
    1. The vehicle does not prevent or disrupt other turnaround/ servicing activities;
    2. The parking brake is applied and the engine is switched off, unless required for the operation of the Ground Support Equipment. For tugs and other non-public road use vehicles, the key is also to be left in the ignition; and
    3. The wheels are turned to face away from the aircraft;
  - 5.11.3.9.9 When exiting the stand always turn away from the aircraft;
  - 5.11.3.9.10 Reversing of vehicles must be avoided where possible. If any vehicle is required to reverse then the driver must visually inspect the area, looking for any obstacles before entering the vehicle and reversing. A 'spotter' must be used to guide the vehicle and warn others.
  - 5.11.3.9.11 Damage to an aircraft, however minor, could have fatal consequences. Any damage or suspected damage to an aircraft must be reported immediately to the respective operation department.

5.11.3.10 An individual's authorization to drive in the movement area may be temporarily or permanently revoked by the ALULA International Airport director, if the individual is deemed not to be adequately proficient.

#### **5.11.4 Driving permit issuance and management**

- 5.11.4.1 No individual is to drive any vehicle/ equipment within the movement area unless the individual has been authorized to do so by Operation Supervisor.
- 5.11.4.2 Each airport driving permit has a maximum validity of 1 year from the issue date. If a person's license has lapsed longer than 6 months then that person is to be treated as a new driver and undergo re-testing.
- 5.11.4.3 Employees who are required to drive vehicles/ equipment in the airside area are to be given adequate training in airside procedures by their respective employers. The training is to include a comprehensive explanation of all relevant safety requirements, regulations and notices. The training methods and material are to be subject to audit by GACA aviation standards or, on request, by ALULA International Airport Safety department.
- 5.11.4.4 Any driver of a vehicle that has a requirement to move where the driver is not having airport driving permit, or the vehicle is not equipped to operate, must follow a permitted vehicle from FRCC with the coordination of Airport administration. The permitted Vehicle should contact FRCC via Radio/telephone and advance warning must be given to guarantee the availability of the service.

#### **5.11.5 Vehicle permits**

- 5.11.5.1 No vehicle/ equipment shall be used within the airside area unless the vehicle has been authorized to do so by ALULA International Airport Operation Supervisor.
- 5.11.5.2 In order to obtain an airside vehicle permit, the vehicle operator must apply to ALULA International Airport Safety Department. In order for an application to be accepted, the vehicle will need to meet age requirements. When the application is approved, it is passed to a third party organization who will complete the required condition maintenance checks.
- 5.11.5.3 On completion of the maintenance checks, each vehicle is awarded a pass or fail. If the vehicle passes inspection, then it will be issued with a pass sticker with an appropriate validity period. The validity period depends on the vehicle type and ranges from 6 months to 2 years. If the vehicle fails, then it is the owners' responsibility to rectify all faults and resubmit the vehicle for testing however, this involves restarting the application process.
- 5.11.5.4 All tests, both passes and failures, must be reported to ALULA International Airport Safety and Operation Departments for record keeping purposes.
- 5.11.5.5 All vehicles with permits must meet certain criteria as detailed below:
  - a. Clearly display the company logos on both sides of the vehicle.
  - b. Clearly display the vehicle permit.
  - c. Be compliant with the vehicle beacon light requirement.
  - d. Be equipped with an airside map, a fire extinguisher, a first aid kit and a safety triangle.
- 5.11.5.6 It is the vehicle owners' responsibility to ensure that the vehicle is properly maintained in between the mandatory testing periods. Any vehicle that has not been properly maintained may be declared unserviceable by ALULA

International Airport Operations Supervisor and may need to be removed from service until deemed serviceable.

- 5.11.5.7 In addition to the technical requirements, there are special conditions concerning the lighting of vehicles. These include:

- 5.11.5.7.1 During hours of darkness, during limited visibility in day time and when driving beneath any underpasses the vehicles low-beam head lights, tail lights and a yellow rotary beacon, visible 360 degrees, where applicable, must be switched on;
- 5.11.5.7.2 All guided vehicles must switch on their low-beam lights;
- 5.11.5.7.3 Driving with parking lights or high-beam head lights is prohibited;
- 5.11.5.7.4 Vehicles with high intensity light bars are not permitted to operate those lights on the airside operational areas;
- 5.11.5.7.5 Any vehicles or carts or pieces of equipment being towed after hours of darkness must have reflectors on all sides of the unit being towed;
- 5.11.5.7.6 During hours of darkness, all disabled vehicles must switch on parking lights or post warning lights. Disabled vehicles must be removed as soon as possible from the aircraft movement area;
- 5.11.5.7.7 Vehicles operating in darkness on the movement area must be lighted so as to enable operation/ FRCC to follow their movements.
- 5.11.5.7.8 Any vehicle entering or moving on the maneuvering area is required to be equipped with:
- 5.11.5.7.9 A suitable radio capable of maintaining two-way communications with FRCC.

#### **5.11.6 Vehicle accident and incident reporting**

- 5.11.6.1 All drivers are to be made aware of the accident and incident reporting procedures that described in Safety Management System (SMS)
- 5.11.6.2 In the event of an accident or incident, the driver is to immediately contact FRCC /operation.
- 5.11.6.3 In the event of an accident or incident, vehicles are to be parked and not moved until the Operations staff arrives. Vehicles may only be moved if there is an immediate danger to life or property. If vehicles are moved, they are to be moved to a safe distance and parked in a safe location. Under no circumstances are drivers to leave the scene until Operations arrive.

## 5.12 Wildlife hazard management

### 5.12.1 Goals and Objectives

The goal of this WHMP is to minimize risk for passengers and flight crews by reducing wildlife hazards and associated risks to aircraft and airport operations caused by wildlife activities on and in the vicinity of the airport.

The objectives of the WHMP are to:

- a. Target high and moderate risk species and habitats that primarily support them both on and off the airport.
- b. Ensure compliance with all relevant airport operational and environmental legislation and regulations.
- c. Ensure that adequate systems are in place to define roles, responsibilities and procedures for managing wildlife risks at the ALULA Airport.
- d. Define the methods by which wildlife hazards are managed at ALULA International Airport.
- e. Develop performance goals and targets for management of wildlife issues and outline how these will be assessed and reviewed.

### 5.12.2 The Airport

At ALULA International Airport situated in the Kingdom of Saudi Arabia in ALULA territory a description of the airport is provided in Table 1 below.

Table 1 - at general information of ALULA International Airport

Element	Description
Airport location	262859N/0380707E
Surrounding land use	Mountains and Desert
Elevation	2046 FT
Airport ownership	GACA
Airport operator	GACA
Traffic profile	Domestic
Runways no./ designation	One Runway=RWY 12/30
Navigation aids	VOR/ILS
Communications	122.8 MHZ
Hours of operation	24 HOURS
Climate	Average Maximum Temperature in day (20/24C) Average Maximum Temperature in night (7/11C) Highest Temperature Observed (31C) Lowest Temperature Observed (5C)
Other	NIL

### **5.12.3 The Management of the Wildlife / Bird Strike Risk (Policy Statement)**

ALULA International Airport is committed to ensuring the safety of aircraft. While the safety of aircraft in ALULA International Airport is paramount, it is not possible to prevent all wildlife strikes. The WHMP aims to reduce the frequency and severity of strikes by focusing management efforts on species and habitats that constitute significant hazards to aircraft that operate at ALULA International Airport.

ALULA International Airport have measures in place, which are aimed at deterring wildlife and birds from settling, and flying on and in the lower flight paths in the vicinity of the airfield as is reasonably practicable.

These measures include:

- a) Hazard Identification and Risk Assessment of bird activity (see SMS Doc)
- b) A Wildlife Hazard Management Plan (WHMP)
- c) Control procedures introduced aimed at reducing the presence of wildlife on the airfield and therefore reducing the risk of a wildlife / bird strike.
- d) The effective use of resources and equipment
- e) A suitably trained Safety Supervisor to oversee the Wildlife Hazard Management Plan

These measures reflect the principles of safety management which the Aerodrome Operator is required to apply to all aspects of aircraft operations within its responsibility.

ALULA International Airport Layout Plan

### **5.12.4 Roles & Responsibilities**

The roles and responsibilities of ALULA International Airport staff are important elements of the Aerodrome Operator's Safety Management System and a contribution to the effectiveness of the WHMP. All staff will have a thorough understanding of their roles within the plan. The roles and responsibilities are detailed below:

#### **5.12.4.1 Aerodrome Manager**

The Overall accountability for bird control lies with the Aerodrome License holder/Director. However, the responsibility could be delegated to the Aerodrome Manager core responsibilities are to:

- a. Assess the wildlife/bird strike risk level.
- b. Determine policy and produce and review the WHMP.
- c. Implement the WHMP
- d. Ensure the inclusion in the Aerodrome manual is correct

##### **5.12.4.1.1 The role includes the following tasks:**

- a. Monitoring and acting on **wildlife/bird** behavior on and in the vicinity of the Aerodrome
- b. Implementation of habitat management i.e.: Vegetation policy, maintenance program in accordance with WHMP and to review and introduce modifications to this program when necessary
- c. Analyze and interpret the log records of bird control activity and bird strike reports and ensure this information is promulgated to all stakeholder and the accountable person
- d. Regular surveys of **wildlife/bird** concentration and movements in the local area. Liaising with local **wildlife/bird** watcher's associations for further information
- e. Liaise with local land owners and game keepers to obtain information on farming plans, game conservation etc.
- f. Seeking advice and assistance where appropriate from Local Planning Authority and outside specialists on matters requiring expert advice

- g. To ensure the WHMP reflect the current policy of the GACA and best practice in the aviation industry.

#### 5.12.4.2 Safety Supervisor

The overall responsibility for wildlife/bird control lies with the Aerodrome Manager, however the day-to-day management and efficient implementation of the WHMP lies with the Safety Supervisor. (Safety supervisor should have had some training on the subject and preferably have an active interest in bird control)

Their role includes the following tasks:

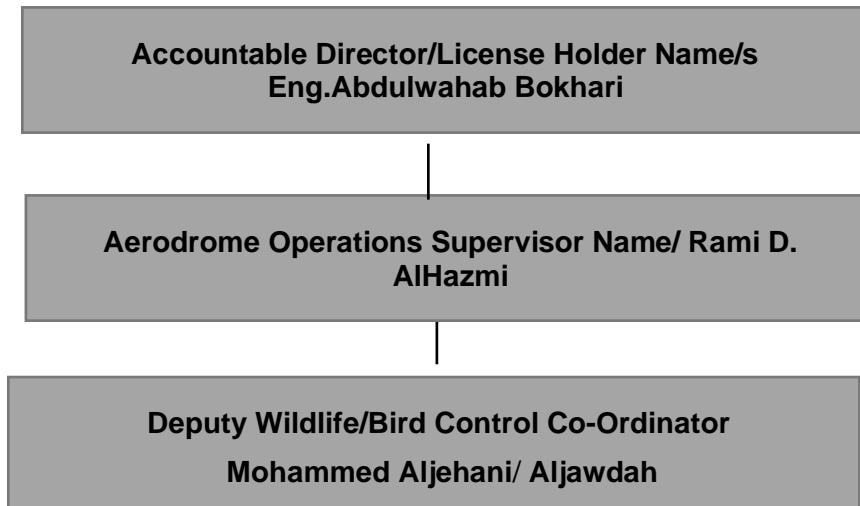
- a. Advise the Aerodrome Manager on all matters relating to wildlife/bird activity and wildlife/bird strike prevention.
- b. Plan and organize all wildlife/bird control operations in accordance with the WHMP.
- c. Ensure bird control operations are implemented in accordance with the WHMP.
- d. Supervise bird control record keeping.
- e. Assist with the supervision of intelligence gathering and planning.
- f. Ensure the correct maintenance of the wildlife/bird control equipment.
- g. Provide information and communications between all interested parties/stakeholders.
- h. Provide a periodic (could be quarterly, six monthly or annual) wildlife/bird control report to the accountable person/s.

#### 5.12.4.3 Operation Supervisor

Their role includes the following tasks:

- a. Maintain proactive surveillance of wildlife/bird activity on the airfield.
- b. Implement active wildlife/bird control measures in accordance with the WHMP.
- c. To reduce wherever possible any identified wildlife/bird strike risk.
- d. Record wildlife/bird and wildlife/bird control activity including any dispersal methods used.
- e. Record and report actual, potential or suspected wildlife/bird strikes

### Flow chart



### **5.12.5 Training Program**

The Wildlife Management and Planning Regulation requires that a training program be established for the WHMP in accordance with the airport standards. Properly trained staff to implement the plan, to reassess risks and to provide updates to this plan every two years, is an essential and required part of the regulation.

Effective wildlife management is critically dependent on staff with the tools, knowledge and motivation to complete the task at hand. The program will address the following:

- a. Nature and Extent of the Wildlife Management Problem;
- b. Regulations, Standards and Guidance;
- c. Wildlife Control Procedures Manual
- d. Liability;
- e. Habitat Management;
- f. Issues Outside of the Airport Boundary;
- g. Active Management;
- h. Removal Techniques;
- i. Wildlife Management Planning;
- j. Development and Implementation of Awareness Programs;
- k. Monitoring; and,
- l. Training Record and Schedule.

In addition to training directly associated with wildlife behavior and the application of management techniques as part of the WHMP, it is essential that safety requirements are fully reviewed and addressed. This should include at a minimum:

- a. Safe use and storage of pyrotechnics;
- b. Safe use, storage and maintenance of pyrotechnic launches
- c. Identification and mandatory use of safety equipment.

The following table details the staff who have attended the training program or are proposed to do so.

**Table. Training Program**

Name	Responsibility/ Title	Attended Training Program	Will Attend Training Program by
Eng.Abdulwahab Bokhari	Airport Director	SMS	Done
MUJAHED M. ALNSARI	Safety supervisor	SMS	Will Arrange with Training department
RAMI D. ALHAZMI	Operation supervisor	SMS	Will Arrange with Training department

### 5.12.6 Hazard Identification

In order to manage the risk of a wildlife/bird strike, aerodrome has developed a procedure for obtaining information regarding the potential wildlife/bird strike risk. wildlife/bird activity on and in the vicinity of the airfield is assessed on a regular basis and a Hazard Log/Risk Assessment produced.

### 5.12.7 Example Hazard log

Q5 Home Event Logout  
Welcome: Anonymous Login Customer: GACA Reporting System

Add Event Report Status : New

Event Risk

Location\* Other الموقع  
Other Location (OEAO) Prince Abdulmajeed Bin Abdulaziz in alula Airport

Event Occurrence Date\* 24/07/19 11:53 PM AST تاريخ حدوث الواقعة  
Date Reported\* 24/07/19 11:53 PM AST تاريخ تقديم التقرير

Event Description\* وصف الواقعة

**Voluntary Occurrence Notification** نموذج بلاغ سري  
Notification of an occurrence that affects air traffic هذا النموذج مخصص للتبيّن عن واقعة أثرت على سلامة الطيران

**Reporter Information (Optional):** معلومات شخصية (اختيارية)

Reporter Name: الاسم \_\_\_\_\_  
Organization: الشركة \_\_\_\_\_  
Office Tel. No.: رقم الهاتف الأرضي \_\_\_\_\_  
Mobile No.: رقم الهاتف المحمول \_\_\_\_\_  
Email: البريد الإلكتروني \_\_\_\_\_

**Aircraft Information (Optional):** معلومات عن الطائرة (اختيارية)

Operator: (المشغل) شركة الطيران \_\_\_\_\_  
Flight Number: رقم الرحلة \_\_\_\_\_  
Type of Aircraft: نوع الطائرة \_\_\_\_\_  
Flight From: (مغادرة من) محطة الإقلاع \_\_\_\_\_  
Flight To: (متوجهة إلى) محطة الوصول \_\_\_\_\_

## Add Event Report

Status : New

Severity:  A - Catastrophic  B - Hazardous C - Major  D - Minor E - Negligible

Rationale for Chosen Severity:

Likelihood:  5 - Frequent  
 4 - Occasional  
 3 - Remote  
 2 - Improbable  
 1 - Extremely Improbable

Rationale for Chosen Likelihood:

Risk Index:

## Risk Severity

A - Catastrophic- Equipment destroyed Multiple deaths.

B - Hazardous- A large reduction in safety margins, physical distress or a workload such that the operators cannot be relied upon to perform their tasks accurately or completely. Serious Injury Major equipment damage

C - Major- A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of increase in workload, or as a result of conditions impairing their efficiency. Serious incident Injury to persons.

D - Minor- Nuisance Operating limitations. Use of emergency procedures. Minor incident.

E - Negligible- Little consequences.

## Likelihood

5 - Frequent - Likely to occur many times (has occurred frequently)

4 - Occasional - Likely to occur some times (has occurred infrequently)

3 - Remote - Unlikely, but possible to occur (has occurred rarely)

2 - Improbable - Very unlikely to occur (not known to have occurred)

1 - Extremely Improbable - Almost inconceivable that the event will occur

## 5.12.8 Example Risk Assessment carried out for Bird Activity on the Aerodrome

		Severity					Risk Index Range	Description	Management Criteria				
		Catastrophic A	Hazardous B	Major C	Minor D	Negligible E							
Probability	Frequent 5	5A	5B	5C	5D	5E	5A, 5B, 5C, 4A, 4B, 3A	Intolerable region	<b>LEVEL -1 (INTOLERABLE)</b> Unacceptable under the existing circumstances				
	Occasional 4	4A	4B	4C	4D	4E	5D, 5E, 4C, 3B, 3C, 2A, 2B, 4D, 4E, 3D, 2C, 1A, 1B	Tolerable region	<b>LEVEL 2 (TOLERABLE)</b> Acceptable based on risk mitigation. It may require management decision				
	Remote 3	3A	3B	3C	3D	3E	3E, 2D, 2E, 1C, 1D, 1E	Acceptable region	<b>LEVEL 3 (ACCEPTABLE)</b>				
	Improbable 2	2A	2B	2C	2D	2E							
	Extremely improbable 1	1A	1B	1C	1D	1E							
Risk Level													
Intolerable (Level-1)						Immediately, less than 24 hours or STOP Operations							
Tolerable (Level-2)						30 Days							
Acceptable (Level-3)						60 Days							
Risk Tolerability Decision Maker (Director/Manager)													
Name					Title								
Date					Sign								
<input checked="" type="checkbox"/> I accept the risk assessment <input type="checkbox"/> I reject the risk assessment													

### **5.12.9 Risk Reduction**

Prevention of a bird strike is not always possible, so to reduce the risk a WHMP has been formulated and introduced as part of ALULA International Airport Aerodromes Safety Management System (SMS).

Our Airfield activities include (Examples: the correct use of the 'Scarecrow Bio-acoustic system', trained staff, recording bird activity and dispersal, habitat management i.e. vegetation removal/cutting and/or grass treatment, culling activity with the local gun club).

Good control should be achievable on the airfield however, off airfield, control could be less achievable.

### **5.12.10 Bird strike Reporting**

Bird/wildlife incidents are defined in (demonstrate your incident reporting system, this system may be electronic or other).

These are:

- a. Confirmed Strikes
- b. Unconfirmed Strikes
- c. Serious incidents

The airfield records all bird strikes as far as it is able. This data is submitted to The GACA by electronic form through (**Q5**) reporting system Records of all monitoring activities are kept in relevant logs and database to provide evidence of management actions and to demonstrate WHMP processes are in place. All records are legible, accessible and stored in a secure environment that prevents loss or damage.

GACA defines the vicinity of an aerodrome as a 13km bird circle surrounding the airfield. The anytime aerodrome conducts annually a survey of 'Off airfield' issues. These include current developments and proposed developments.

For example:

- a. Landfill sites (food waste attracts birds and starlings which travel up to 30miles)
- b. Aggregate developments (large areas filled with water attract feral geese etc.)
- c. Industrial developments with flat roofs (these provide a safe breeding habitat for birds).
- d. Sustainable Drainage Schemes (SUDS) which attract feral geese and wildfowl
- e. Amenity planning (short grass and bird feeding by the public attract various species)
- f. Golf Courses (water and short grass attract feral geese etc.)
- g. Nature Reserves (designed to improve bio-diversity attract several species)

Airport Developments the airport operator liaison with non-airport agencies and local landowners for any development that may attract significant numbers of hazardous birds/wildlife. Any new developments (crop harvesting, seed planting, ploughing, establishment of land or water features, hunting, etc., that might attract birds/wildlife) are subjected to the aerodrome safeguarding policy and to a risk assessment process and changes to the proposal sought or opposed if a significant increase in bird activity is likely and bird strike risk is increased as a result.

### 5.12.11 List All Sites Below (High Risk within 5km)

1. These sites identified are all within 5km of the airfield and are listed below, numbered in order of risk to the aerodrome, with a summary of the site, and these sites are illustrated on the Bird Circle map /wild life attraction maps.
  - a. Mountains
  - b. Desert
2. These sites are outside the 5km, but fall within the GACA 13km circle surrounding the airfield, however they attract significant wildlife /bird species and are included for the purpose of bird/wildlife management off airfield.



2.5 KM from (South) to Airfield  
2.5 KM from (North) to Airfield



Imagery ©2019 DigitalGlobe, CNES / Airbus, Map data ©2019 1 km

Measure distance

Total distance: 5.00 km (3.11 mi)

2.5 KM from (East) to Airfield

2.5 KM from (West) to Airfield

### 5.12.12 List All Sites Below (Low Risk outside 5km but within 13km)



6.5 KM from (East) to Airfield  
6.5 KM from (West) to Airfield



6.5 KM from (South) to Airfield

6.5 KM from (North) to Airfield

#### 5.12.13 Aerodrome Ornithology

Wildlife/Bird control personnel are able to identify correctly and be familiar with the behavior of all bird's species commonly encountered on the airfield and identified with in this WHMP. to behavior and seasonal activity.

Local animals are:

- Uromastyx
- Snake
- Scorpion
- dog

## **5.13 Obstacles**

### **5.13.1 Purpose and scope**

- 5.13.1.1 The purpose of this subpart is to ensure that suitable provision is made to monitor and control the erection of both temporary and permanent obstacles that might penetrate the OLS and restrict aircraft and airport operations.
- 5.13.1.2 This procedure applies to all staff involved in the approval of new obstacles and in the monitoring and reporting of activities on and around the airport.
- 5.13.1.3 The procedure related to obstacle control is dependent on infrastructure and building development on or in the vicinity of the aerodrome. ALULA International Airport's director shall be responsible to ensure that the OLS are not infringed within the aerodrome boundary as well as in the vicinity of the aerodrome. GACA has its own responsibilities to ensure that the OLS is not infringed.

### **5.13.2 Persons responsible**

- 5.13.2.1 The Airport director prepares and maintains the OLS plan for ALULA International Airport.
- 5.13.2.2 The Airport Operations Supervisor has responsibility for the day-to-day operational management function relating to the OLS and PANS-OPS surfaces to detect unapproved obstacles and to take measures to have them removed or lowered to an altitude for safe aircraft operations and reporting to GACA, Aviation Standards for appropriate action.
- 5.13.2.3 Airport director is responsible for ensuring that planned construction works off the aerodrome do not infringe the OLS and the air navigation equipment safeguarding areas.
- 5.13.2.4 GACA, Aviation Standards is responsible for providing technical advice on the location of OLS/ PANS-OPS surfaces in relation to controlled activity applications and the preparation of Type 'A' charts.

### **5.13.3 OLS monitoring**

- 5.13.3.1 The Airport Operations Supervisor is to maintain a register of known objects/ structures which exceed the vertical limits of the OLS. This register will include objects/ structures which are marked and/ or lit.
- 5.13.3.2 The Operations Supervisor Officer shall monitor the OLS regularly during each shift and report in accordance with the daily aerodrome serviceability inspections, however, OLS plan needs to be updated by Department of Cartography.
- 5.13.3.3 Monitoring the height of buildings or structures within the boundaries of the OLS will be as follows:
  - o Reporting and following up on OLS breaches found through routine aerodrome inspection procedures. These procedures are required so that aircraft can operate safely in the vicinity of the aerodrome; and
  - o Performing a cyclical assessment of the OLS for each runway by conducting periodic surveys of obstacles that are located within these surfaces. This audit function is to monitor surrounding airspace so as to identify obstacles that may have been constructed without permission or assessment. It is important to monitor the encroachment of such obstacles so as to prevent the airport from becoming unusable in the future.

#### **5.13.4 Notification to GACA, publication and removal**

- 5.13.4.1 GACA is to receive applications from airport director to erect buildings or structures on the aerodrome. The director is to maintain a register of all applications and ensure that each application is assessed and processed in accordance with its potential effect on the aerodrome.
- 5.13.4.2 The Airport director is to refer submissions to GACA and SANS for assessment of applications that would constitute controlled activities or obstacles. The Airport director is to seek written confirmation from the proponent that any obstacle marking and lighting conditions are understood and will be complied with.
- 5.13.4.3 For long-term controlled activities, the Airport director is to seek written confirmation from the proponent that surveyed information of the finished height of a development or tower crane will be provided. The ALULA International Airport's director will forward, when received, submissions from all potentially affected parties, together with ALULA International Airport's comments, to GACA (through ALULA International Airport Operations) for approval, approval with conditions, or refusal.
- 5.13.4.4 The ALULA International Airport's director shall liaise with GACA and City municipality. This should include outlining Airport Master Plan and any changes proposed within it that could affect applications for proposed building activities. This may also involve (ALULA) giving notice of any planned building activities that need to be assessed by ALULA International Airport and GACA Aviation standards.
- 5.13.4.5 The director is to send a copy of all approvals for controlled activities including NOTAM details to the ALULA International Airport's Operations Supervisor. The Airport Operations Supervisor is to initiate NOTAM action for the controlled activity. The Operations Supervisor will also ensure that approved controlled activities, such as crane use are monitored for compliance with the conditions of their approval.
- 5.13.4.6 If a suspected penetration of the protected airspace is detected, or if a temporary obstacle is erected without approval and detected during the aerodrome serviceability inspection, the Operations Supervisor is to:
  - 5.13.4.6.1 Determine whether the obstacle constitutes a controlled activity;
  - 5.13.4.6.2 Immediately advise FRCC of the obstacle;
  - 5.13.4.6.3 Initiate NOTAM action; i.e. the obstacle location and height details, upon request, will be confirmed by the ALULA International Airport's director and if the obstacle is suspected of infringing a runway approach or take-off surface, the runway direction affected will be immediately withdrawn from aircraft operations;
  - 5.13.4.6.4 If the obstacle is on airport land, arrange for its immediate removal;
  - 5.13.4.6.5 If the obstacle is outside the aerodrome boundary, attempt to have the obstacle removed by negotiation;
  - 5.13.4.6.6 If necessary, contact the ALULA International Airport's director to request that an amended reduced runway length available be provided; the location of a displaced threshold; supplementary take-off distances over the obstacle and ensure that the necessary markings are displayed; and

- 5.13.4.6.7 Once the obstacle is removed, advise FRCC, take up any temporary markings and initiate action to cancel any relevant NOTAM.
- 5.13.4.7 The Airport director will notify GACA Aviation standards of detected infringements as soon as practicable.
- 5.13.4.8 The Airport director is to ensure that an annual instrument survey of the approach, take off and transitional surfaces is completed to verify or amend the information published in the AIP. If it is indicated from the initial survey data that an obstacle exceeds the published data, Airport director is to immediately advise GACA aviation standards.
- 5.13.4.9 The Airport Operations Supervisor is to initiate the raising of a NOTAM. GACA aviation standards will be advised of the infringement, and if required, be requested to make an assessment. Once the survey data has been processed, if confirmed, the information will be published in the AIP.
- 5.13.4.10 The ALULA International Airport's director will:
  - 5.13.4.10.1 Review the data against the OLS infringement register and liaise with the Airport Operation Supervisor to determine if the obstacles have been approved and add any new obstacles to the register; and
  - 5.13.4.10.2 Determine which obstacles can be removed or reduced and prioritize these for action.
- 5.13.4.11 A survey will normally be required to confirm that remedial work to remove the infringement has been successful. The result of this survey is to be provided to the Airport Operations Supervisor as the latter will arrange for the cancelling of any NOTAM as required.
- 5.13.4.12 The delegated Operation Supervisor is to maintain the Aerodrome Obstacle Chart ICAO Type a (Operating Limitations) for ALULA International Airport International Airport. Each runway direction will be surveyed and obstacle data sheets updated and amended annually. Any Type A chart is to be reissued, following the annual survey, or when a change to significant obstacles penetrating the surface for that runway occurs.
- 5.13.4.13 The Operation Supervisor is to record the details of any newly approved controlled obstacles affecting the Type a charts.
- 5.13.4.14 If there is a suspected change in published information due to a new obstacle, the amended data is to be passed through airport director to AIM who will ensure that the information is promulgated in the AIP.
- 5.13.4.15 A method of calculating the allowable heights for temporary obstacles within the take-off surfaces is to assess them against the existing declared distances. A temporary obstacle may be permitted above the standard OLS heights provided that the published declared distances are not altered. This should only be done if an assessment of the Type A chart for the runway shows that the proposed obstacle height is generally comparable to other obstacles in the vicinity.

### **5.13.5 Controlling obstacles within the authority of airport**

- 5.13.5.1 Changes in the physical characteristics of the aerodrome, including the erection of new buildings and alterations to existing buildings or to visual aids are not to be made without approval from GACA aviation standards. The airport director will seek to obtain a No Objection Clearance (NOC).

### **5.13.6 Controlling new developments in the vicinity of aerodrome**

- 5.13.6.1 Safeguarding of any restricted development zone (or Airport Vicinity Zone) is to be ensured by GACA Aviation standards. Applicants (developers) are required to submit application to municipality department for seeking approval. Municipality department shall forward application to the airport director who in turn will forward, with his recommendations and comments, to GACA aviation standards for seeking that no objection certificate. Within Name of Airport boundary, it is shall be ensured by Name of Airport not to erect any object which within the Obstacle Limitation Surfaces (**About 15 km of aerodrome reference point**) without approval the GACA and shall insure that any construction in the vicinity of the airport does not infringe upon any of the following surfaces:
- 5.13.6.1.1 Take-Off climb surface;
  - 5.13.6.1.2 Approach surface;
  - 5.13.6.1.3 Transitional surface;
  - 5.13.6.1.4 Inner horizontal surface; and
  - 5.13.6.1.5 Conical surface.
- 5.13.6.2 Other planning proposals such as road lighting schemes, whilst not significant in terms of function and/ or height, can also cause operational problems and are to be taken into consideration.

Safeguarding of any projection of directed bright light sources at an aircraft and pyrotechnic displays it is shall be ensured by Name of Airport which places a duty upon the Airport to ensure that the aerodrome is appropriately safeguarded, to ensure the continued safety of aircraft operations.

## **5.14 The Removal of a disabled aeroplane**

### **5.14.1 Contact details of responsible persons**

- 5.14.1.1 The contact details for all persons involved in operational and safety functions are listed in Appendix B of this Manual.

### **5.14.2 Purpose and scope**

- 5.14.2.1 The purpose of this subpart is to provide for an efficient coordinated response to quickly and safely remove an aircraft which has become disabled on or adjacent to the movement area of ALULA International Airport. The removal or recovery of a disabled aircraft is also addressed within the ALULA International Airport AEP.
- 5.14.2.2 These procedures apply to ALULA International Airport staff and contractors involved in the removal of disabled aircraft and the return of the airport to full serviceability.
- 5.14.2.3 These procedures are dependent on the disablement of an aircraft on or adjacent to the movement area of ALULA International Airport. Specific requirements include:
- 5.14.2.3.1 The role of ALULA International Airport and the holder of the aircraft certificate of registration;
  - 5.14.2.3.2 Arrangements for notifying the holder of the certificate of registration;
  - 5.14.2.3.3 Arrangements for liaising with FRCC; and
  - 5.14.2.3.4 Arrangements for obtaining equipment and personnel to remove the disabled aircraft.

### **5.14.3 Persons responsible**

- 5.14.3.1 Control of the actual lifting and/ or removal of large aircraft is the responsibility of the registered owner or the operator concerned, although they may seek advice, where necessary, from their insurance representative or the aircraft manufacturer. However, if the registered owner or operator is unable to remove the aircraft in a timely manner, ALULA International Airport will assist to prevent an excessive delay.
- 5.14.3.2 In case of small aircraft (e.g. if the maximum take-off mass is below 2,250 kg) it may be possible for ALULA International Airport, with the agreement of the registered owner or operator, to undertake the responsibility for removal of the aircraft. In any case, it is to be ensured that the disabled aircraft or its severed parts are left undisturbed and not tampered with or otherwise removed from the site without prior clearance from the AIB and the aircraft owner/ operator. Only after these clearances are achieved can the aircraft be removed.

### **5.14.4 Disabled aircraft removal**

- 5.14.4.1 If an aircraft is disabled on any part of the movement area, FRCC notifies the operations and provides identification information relating to the type of aircraft and the nature of the disablement and/ or damage, along with any other useful information (e.g. number of passengers, and fuel on board). The operations then advises the appropriate call-out parties as required in

- accordance with the AEP and the holder of the certificate of registration of the aircraft.
- 5.14.4.2 As soon as the Airport Operations Officer becomes aware of a disabled aircraft (regardless of size) on runways or taxiways, or obstructing access on an apron, the Operations Officer is to immediately provide details to FRCC and the ALULA International Airport's Duty Manager.
  - 5.14.4.3 The Airport Operations is to arrange for a NOTAM (if required) to be raised detailing the serviceability status of the affected facility and is to ensure that all necessary unserviceability markers are displayed.
  - 5.14.4.4 The Airport Operations is to ensure that inspections of airfield facilities affected by the emergency and/ or recovery operation are conducted and any damage to those facilities is reported, as appropriate. The ALULA International Airport Operations is to establish an access route to and from the disabled aircraft site and is to ensure that escorts are provided as required.
  - 5.14.4.5 The Airport Duty Manager is to ensure that the recovery plan is, or has been, activated, that the operation has activated the appropriate call-out and that there are adequate operational resources to manage the incident. The Airport Duty Manager is to liaise with the ALULA International Airport Recovery Coordinator and provide regular briefings to the other ALULA Airport's senior managers as required.
  - 5.14.4.6 The AIB is responsible for the investigation of all aircraft accidents and incidents involving civil aircraft operations in Saudi Arabia. The AIB may impound an aircraft following an incident or accident. The Safety Manager and Operations Supervisor staff are to cooperate with investigators should an on-site investigation be necessary.
  - 5.14.4.7 A disabled aircraft cannot be removed until authorized, either orally or in writing, by the AIB investigator(s). The AIB may request assistance with the removal of an aircraft prior to the completion of their investigation, in which case the Aviation Investigation Bureau (AIB) shall be responsible for the recovery action. ALULA International Airport Manager, Safety and all relevant staff shall cooperate with AIB investigators should an on-site investigation be necessary.
  - 5.14.4.8 When the aircraft owner/ operator is advised of a disabled aircraft they should initiate the recovery action so that the wreckage may be removed as soon as possible following its release by the AIB. Removal and disposal of fuel and other hazardous materials may be required prior to commencement and/ or completion of the AIB investigation, but in all cases prior to the aircraft's removal.
  - 5.14.4.9 The aircraft owner/ operator is responsible for the removal and disposal of fuel and other hazardous materials associated with the aircraft and for the aircraft's removal once this has been approved by the AIB.
  - 5.14.4.10 If requested, ALULA International Airport may act in a contractual capacity for the aircraft owner, and as such may recover all costs involved in the recovery. Prior to the removal of an aircraft, the owner or the owner's representative, is to (as far as reasonably practicable) indemnify ALULA International Airport the movement of the disabled aircraft.
  - 5.14.4.11 If the aircraft owner/ operator is unwilling or unable to remove a disabled aircraft, then after consultation with the AIB, the Director may organize for a competent contractor (with the required skills) to remove the aircraft to an alternative location on the airport.

- 5.14.4.12 The ALULA International Airport Recovery Coordinator, as nominated in the AEP or as determined by the scale of the incident, is to assist in and coordinate the overall recovery of the disabled aircraft. This may include:
  - 5.14.4.12.1 Securing the incident site, including any debris trail;
  - 5.14.4.12.2 Liaising with the airline or aircraft operator; and
  - 5.14.4.12.3 Liaising with the AIB investigation team to obtain verbal or written clearance prior to the remove the aircraft, so that normal serviceability and operations can be restored as soon as possible.
- 5.14.4.13 The AEP Incident Commander is to ensure that the aircraft owner/ operator has been notified. The initial notification is relayed through the operation but depending on the aircraft this may only be on a local basis. The owner's details may be obtained through the Register of Aircraft maintained by GACA Aviation standards. The AEP Incident Commander can be contacted through the TOCC.
- 5.14.4.14 The ALULA International Airport Recovery Coordinator, as nominated in the AEP call-out roster or as determined by the scale of the incident, is to assist in the planning of the removal operation in consultation with the aircraft owner/ operator and relevant authorities. The ALULA International Airport Recovery Coordinator is also responsible for coordinating the return of the airfield to full operational status.
- 5.14.4.15 The ALULA International Airport Recovery Coordinator is the chairman of the Airport Recovery Coordination Committee (ARCC). The ARCC shall consist of such persons with technical expertise as is required. The ALULA International Airport Recovery Coordinator is to determine the composition of the ARCC but it is to include:
  - 5.14.4.15.1 The aircraft owner, or owner's representative;
  - 5.14.4.15.2 RFFS;
  - 5.14.4.15.3 AIB;
  - 5.14.4.15.4 RSAF (for security);
  - 5.14.4.15.5 Airport Operations Supervisor;
  - 5.14.4.15.6 Airport Safety Manager,;
  - 5.14.4.15.7 Other persons with technical expertise for recovery as necessary (e.g. engineers).
  - 5.14.4.15.8 RFFS
- 5.14.4.16 The ARCC is responsible for determining the scope of the recovery plan, approving the recovery plan and for monitoring the removal operation. In the absence of an aircraft owner/ operator, or a representative of the owner, the ARCC may implement the recovery plan.
- 5.14.4.17 When a disabled aircraft is removed from the maneuvering area it is to be taken to a location, and by a route, approved by ALULA International Airport Airport's Recovery Coordinator. The AIB may have specific storage requirements that must be considered when selecting a storage location.
- 5.14.4.18 If an emergency involves a RSAF aircraft, the RSAF is to authorize and arrange its removal. The RSAF may request assistance with the removal of an aircraft prior to the completion of their investigation, in which case the RSAF is to be responsible for the recovery action.
- 5.14.4.19 The AEP has been issued as a separate document that is maintained by ALULA International Airport on behalf of the AEP and includes procedures

for the recovery of a disabled aircraft. Those procedures set out the responsibilities of each agency in the recovery of a disabled aircraft at Airport. Each responding agency is responsible for developing its own procedures; however those procedures are to also meet the requirements of the AEP and as stated in this Manual.

- 5.14.4.20 The Emergency Operations Center Director, together with input from the ALULA International Airport Recovery Coordinator is responsible for developing agreements with third parties providing services for the removal of disabled aircraft either on the airside or in the area within 1,000 meters of each runway threshold.
- 5.14.4.21 ALULA International Airport will need to enter into agreement with several independent contractors to ensure that expertise, materials and supplies are available when needed. Although aircraft owners/ operators, particularly air carriers, may decide to use their own personnel and equipment for recovery, the Airport as a key recovery stakeholder encourages aircraft owners/ operators to rely on experienced and well-equipped independent contractors if it becomes obvious that such assistance is needed.
- 5.14.4.22 The following categories of third party assistance have been identified:
  - 5.14.4.22.1 Aircraft maintenance;
  - 5.14.4.22.2 Aircraft manufacturer;
  - 5.14.4.22.3 Insurance adjustor;
  - 5.14.4.22.4 Accident investigator;
  - 5.14.4.22.5 Heavy equipment (and operators);
  - 5.14.4.22.6 Specialized equipment;
  - 5.14.4.22.7 Utilities providers; and
  - 5.14.4.22.8 Hazardous materials containment/ removal.
- 5.14.4.23 The International Air Transport Association (IATA) has established the International Airlines Technical Pool (IATP) that is a convention of airlines made up of over 100 member airlines. Under its auspices, members share aircraft recovery kits, aircraft parts and tooling, ground handling equipment and manpower /facilities. The IATP status of the airlines operating at the ALULA International Airport is described in the AEP. The closest kit, located in Middle East, is owned by QATAR Airways and is capable of recovering an Airbus 380 aircraft). There is also a ready supply of equipment such as heavy lift cranes, mobile cranes, tow trucks and earth moving equipment available within ALULA municipal area, some of which may already be under various contracts with Airport.
- 5.14.4.24 Additional guidance is provided in the following documents:  
SOP\_OEAO\_ADMIN\_01\_016, Restricting aircraft operations during closures.

## **5.15 Dangerous Goods**

### **5.15.1 General Rules**

5.15.1.1 The general rules governing safe handling and storing of Dangerous goods that transferred by air at the Airport are described in GACAR 109.

### **5.15.2 Purpose and scope**

5.15.2.1 The purpose of this subpart is to ensure the safe handling and storage of hazardous materials on the aerodrome, including:

- Explosives
- Gases
- Flammable liquids
- Flammable solids
- Oxidizing substances
- Toxic substances
- Radioactive material
- Corrosive substance
- Miscellaneous dangerous goods

### **5.15.3 Activation modality**

5.15.3.1 These procedures are intended to ensure both public safety and the continued safety of aircraft operations. These procedures apply to ALULA International Airport staff, airport tenants and other airport users engaged in the handling of hazardous materials on or adjacent to the movement area of ALULA International Airport International Airport.

5.15.3.2 These procedures relate to fuel handling and other hazardous material handling. Specific requirements include:

5.15.3.2.1 Arrangements for special areas on the aerodrome to be set up for the storage of inflammable liquids (including aviation fuels) and any other hazardous materials; and

5.15.3.2.2 The method to be followed for the delivery, storage and dispensing and handling of hazardous materials.

### **5.15.4 Persons responsible**

5.15.4.1 Each organization involved in the supply of aviation fuel to aircraft is responsible for compliance with safe storage, handling and dispensing provisions. Fuel tankers may be used. The refueling companies maintain a firefighting system in addition to ALULA International Airport RFFS.

5.15.4.2 Fuel Company Supervisor is responsible for delivery, storage, disposing, using, and handling hazardous material.

5.15.4.3 RFFS Chief is responsible for daily inspection of the Hazardous Material.

### **5.15.5 Focal point information of RFFS chief:**

Name	Role	Phone	mobile	fax	Email
Adnan Abed Al oufi	RFFS Chief	0148847101	0549992909	0148847103	aaloufi@cluster2airports.sa

### **5.15.6 Storage of dangerous goods:**

The goods will be stored in the designated *dangerous goods area* in the warehouse or hangers. Separate rooms have been designated for the storage of different classes of dangerous goods.

### **5.15.7 Fuel handling (GROUND OPERATION DEP):**

Aerodrome operator to ensure conformity with the specifications, procedures and recommended practices contained in the Joint Inspection Group (JIG) standards for into-plane fueling services, airport depots and hydrant if were applicable. (Ref.GACAR 151.5.A.2)

Aerodrome operator should ensure into-plane fuel service providers hold comprehensive JIG audit report for the with a minimum rating of "satisfactory". ((Ref.GACAR 151.23.G)

### **5.15.8 Training and acceptance:**

Dangerous Goods acceptance and handling staff shall have completed appropriate Dangerous Goods training in accordance with the applicable regulations and requirements. A 'Dangerous Goods Acceptance Checklist' will be used to verify dangerous goods shipments are accepted in accordance with all applicable requirements and regulations for transportation on an aircraft.

All employee working with hazardous material must have dangerous goods training.

ALULA International Airport requires that Initial and periodic dangerous goods training programs have to be established and maintained by employers for:

- a. Shippers of dangerous goods and shippers agents.
- b. Airline Operators.
- c. Agencies acting on behalf of airline operators for the processing and transporting of air cargo and/or passengers.
- d. People, organizations or enterprises located at the airport, which are involved in the receiving, loading, unloading, transferring or other processing of cargo.
- e. Other agencies, which handle dangerous goods cargo.

### **5.15.9 Build-up**

Dangerous goods Packages will be inspected for damage or leakage prior to being loaded into a ULD. Damaged and leaking packages will be removed and excluded from flight and action initiated in accordance with Handling Dangerous Goods Accident/Incident procedure.

Dangerous goods will be separated from other cargo or incompatible materials in accordance with category restrictions and segregation requirements published in the IATA DGR. Special handling instructions from shipper will be implemented.

Upon build-up of ULDs containing dangerous goods, it will be ensured that the ULD has a dangerous goods ULD tag that is marked with the class or division number(s) of the dangerous goods contained therein.

Dangerous Goods cargo accepted and labeled as 'Cargo Aircraft Only' must be prepared and forwarded for loading onto cargo aircraft only with the hazard and CAO labels clearly visible. If the ULD contains 'Cargo Aircraft Only' packages, the relevant staff will ensure that the tag indicates the same.

**5.15.9.1 Inventories** - The managers of air cargo logistics, road and ground departments, desalination/ waste treatment plants, medical facilities, and Saudi Arabian Airlines are to furnish a detailed list of all hazardous materials and/ or dangerous goods to ALULA International Airport each three-month period. This will enable the Airport to gauge not only the amounts of hazardous materials held on-airport at any one time but also the trends and storage capabilities.

**5.15.9.2 Inspections** – ALULA International Airport RFFS conduct monthly inspections of all approved facilities and areas storing and handling hazardous materials and/ or dangerous goods on the airport. A report of each inspection will be submitted to Airport Safety Supervisor.

#### **5.15.10 Other hazardous material handling**

- 5.15.10.1** All hazardous cargo, including chemicals and flammables, are to be stored in designated areas within the cargo or hanger facilities after observing all safety segregation precautions.
- 5.15.10.2** The following precautions are also to be taken while handling/ storing hazardous materials:
  - a. Dangerous goods are to be segregated from each other on the basis of their hazard classification in accordance with Dangerous Goods Regulations. This information should also be displayed in storage areas;
  - b. Emergency exits should always be kept clear of any obstructions; and
  - c. Product information is to be readily available to ALULA International Airport International Airport RFFS in the event of a spill in order to best combat the potential exposure and provide appropriate treatment.
- 5.15.10.3** Lubricants or waste oils shall not be kept or stored in or about hangars except in rooms specifically designed for oil storage and as approved by the airport Director.
- 5.15.10.4** Oil or flammable materials shall not be disposed of in sewers or drainage systems. Such materials shall be placed in disposal receptacles which have been approved by the airport manager according to the regulations of the General Authority of Metrology and Environmental Protection.
- 5.15.10.5** Material Safety Data Sheets (MSDS) should be provided to all persons required to handle hazardous materials on ALULA International Airport. The relevant employer, tenant or contractor is responsible to ensure that the required MSDS is available.
- 5.15.10.6** The Airport has its own spill response procedures but needs to ensure that guidance material is available to tenants to ensure the correct handling and reporting of spills.

(Refer to chapter 11 of OEAO\_AEP)

## **5.16 Low visibility operations**

### **5.16.1 Purpose**

The aim of these procedures is to provide pilots with information relevant to aircraft arrival/departure intended for low visibility operations.

### **5.16.2 Low Visibility Conditions**

Low visibility conditions at ALULA International Airport are defined as:

- a. Current or expected Meteorological Visibility is 1000m or less for runway 30.  
And 800 meters or below, or RVR 550m or less for runway 12.
- b. A current expected Cloud Ceiling below 200 meters.

### **5.16.3 Responsibilities of Low Visibility Operations**

5.16.3.1 Preparation and Implementation of LVP

5.16.3.2 Obtaining and disseminating meteorological information, including runway visual range (RVR) and surface visibility.

5.16.3.3 FRCC /Operation Supervisor: FRCC /Operation Supervisor is responsible for declaring LVP according to the conditions as described above. In such case FRCC /operation will inform the following airport community regarding preparations for LVP activities:

- a. RFFS
- b. Safety Supervisor
- c. Maintenance Contractor
- d. Airport Security (RSAF)
- e. SGS Station Manager
- f. APSCO
- g. Saudi Custom

5.16.3.4 RSAF: The responsibility of RSAF is to ensure that all access gates to airside are manned and security officers on patrols are alerted. Security officers of all access gates shall advise all staff entering the airside that LVPs are in process.

5.16.3.5 Maintenance department: Maintenance department must switch on all stand-by generators to ensure that all stand-by generators are operational; they shall notify the FRCC /operation about the readiness of the generators. Maintenance shall be ready to fix any light malfunctions identified by FRCC /operation.

### **5.16.4 Responsibilities During Low Visibility Operations Aircraft Movements**

5.16.4.1 FRCC /operation will take the following measures to guarantee safe aircraft movements during LVO:

- a. Only one aircraft at a time shall be permitted on the movement area.
- b. Turn on all airfield lighting with the highest intensity.
- c. The power standby generator must be kept ready.
- d. The pilots have to be informed about the current visual range.
- e. Only taxiways with fully operational lighting shall be used.

5.16.4.2 FRCC /operation will inform Maintenance department for any lighting malfunctions.

#### **5.16.5 Vehicle Movements**

To guarantee safe vehicle movements in the airfield and to prevent any incidents or accident between vehicles and aircraft, all maintenance and construction works have to be stopped and the staffs have to vacate the movement areas during LVO. All vehicles requiring entering the movement area must have a notification from FRCC /operation prior to entry. No works are permitted during LVP. Vehicles must not proceed beyond any runway holding position, or from a designated parking position, onto a runway without a notification from FRCC. Tugs involved in a push back operation are permitted to enter the taxiways when coupled to an aircraft only under escort of a Ground Handling Operations Officer Vehicle. The tug must return to its stand immediately after push back is finished.

#### **5.16.6 Cancellation of Low Visibility Operations**

When the visibility conditions rise above the critical limits, FRCC /operation will cancel LVO and declare normal operations again. In such case, FRCC will inform pilots.

## **5.17 Protection of sites for radar, navigation aids and meteorological equipment**

### **5.17.1 Purpose and scope**

5.17.1.1 The purpose of this subpart is to provide the particulars of the procedures for the protection of sites for radar, radio navigation aids, and meteorological equipment located at ALULA International Airport to ensure that their performance will not be degraded through operational and development activities on the airport.

5.17.1.2 These procedures apply to all ALULA International Airport staff engaged in operations and development.

5.17.1.3 These procedures relate to the ongoing need to protect sites for radar, radio navigational aids, and meteorological equipment. Specific requirements include:

- a. Arrangements for the control of activities in the vicinity of radar and navigation aid installations;
- b. Arrangements for ground maintenance in the vicinity of these installations; and
- c. Arrangements for the supply and installation of signs warning of hazardous microwave radiation.

### **5.17.2 Persons responsible**

5.17.2.1 SANS has overall responsibility for the control of activities and maintenance, ground leveling, grading, and vegetation control in the vicinity of radar, navigation aids, and meteorological equipment.

5.17.2.2 The Airport Operations Supervisor has key roles in ensuring these procedures are followed.

### **5.17.3 Activities control**

5.17.3.1 The Airport is referring to SANS/meteorological department for assessment of any developments which may affect the protection of radar navigation aids, meteorological equipment. The SANS/ meteorological department advice received is to be considered in any planning and /or approval process.

5.17.3.2 SOP\_OEAO\_ADM\_01\_017, Protection of sites for radar and navigation aids provides additional details. This SOP applies to the protection of areas encompassing the radar and navigation aids at ALULA International Airport.

5.17.3.3 The Airport director, who is responsible for all airport works is to ensure that the required notification is given to SANS. meteorological department, at the planning stage, of:

5.17.3.3.1 Proposals to erect new structures (including boundary fences) or to carry out works in the vicinity of radar, navigation aids, and meteorological equipment which may affect the signals to and from those facilities;

5.17.3.3.2 Preparation of a work permit for works outlining the notification period to facilitate SANS/ meteorological department to deactivate the navigation aid/meteorological equipment respectively.

5.17.3.3.3 Proposed excavation work within (90) meters of cables associated with the facilities; and

5.17.3.3.4 Seek Advice on the location of the critical and sensitive areas associated with radars, navigation aids, and meteorological equipment.

5.17.3.4 Normally, no work or activity is permitted to be carried out in the critical and sensitive areas. If work is to be carried out, it must only be with the prior permission of the ALULA International Airport's Operations Supervisor and the facilities affected will be reflected in a NOTAM.

5.17.3.5 The Operations Supervisor is to ensure that all persons involved in aerodrome works are informed, and comply with the restrictions imposed to protect radars, navigation aids and their associated cables. This applies to Airport staff, Airport contractors and any other organization carrying out work. The works party must not enter the relevant restricted area without notification from FRCC /operation/meteorological department.

5.17.3.6 Radar antennas are located in an isolated area and kept clear of obstructions. No work or activity takes place at these locations. The other aids located outside the aerodrome are protected by construction of a wall/ fencing and are guarded.

#### **5.17.4 Ground maintenance**

5.17.4.1 SANS/Meteorological department is responsible for the maintenance of their equipment at ALULA International Airport. The coordination of the maintenance of ground level grading in the vicinity of radar, navigation aids, and meteorological equipment is the responsibility of the Airport Operations Supervisor.

5.17.4.2 The Airport Operation Supervisor is to arrange for the deactivation/ activation of any equipment if works of a maintenance nature in the vicinity of the aid may interfere with the signal, or if the signal from the aid may be a hazard to the works party.

#### **5.17.5 Warning signs supply and installation**

5.17.5.1 Sign boards displaying the protected area for navigation aids installation, sensitive areas, and critical areas have been provided. This includes signage necessary to protect persons from any hazards, including microwave radiation that may be emitted from radars and navigation aid facilities. ALULA International Airport Operations Supervisor is responsible for arranging the erection of signboards at any other locations as and when required by SANS.

### **5.18 Aerodrome works – safety**

#### **5.18.1 Contact details of responsible persons**

5.18.1.1 The contact details for all persons involved in operational and safety functions are listed in Appendix B of this Manual.

#### **5.18.2 Purpose and Scope**

5.18.2.1 The purpose of this subpart is to provide the particulars that relate to construction and maintenance work (including work that may have to be carried out at short notice) on or in the vicinity of the movement area.

5.18.2.2 Specific elements to aerodrome works include:

- a. Project planning and preparation together with the project submission process.
- b. Remediation works on pre-existing infrastructure and assets which may be project related but are not considered as new projects as there is no configuration change (internal to ALULA International Airport);
- c. Routine maintenance works on any part of the movement area (internal to ALULA International Airport); and. Emergency repairs.

### **5.18.3 Aerodrome works project (planning/ preparation/ compliance/ authority acceptance)**

5.18.3.1 The changes in the physical characteristics at the airport shall be carried out after seeking prior approval from GACA aviation standards.

5.18.3.2 Project proposals shall comply with the criteria contained in GACAR's.

5.18.3.3 Projects that involve change to the aerodrome infrastructure within the aerodrome boundary fall into three categories:

- a. **Developments:** New or major upgrade of infrastructure, for example, new buildings, taxiways, aprons, visual aids and navigational aids;
- b. **Changes:** Existing infrastructure or physical characteristics are being changed for example, reconfiguration of stands, changes to the runway or Declared Distances; and
- c. **Maintenance (excluding routine maintenance):** Existing infrastructure is being repaired, refurbished or replaced to ensure continuance without changing the characteristics of the infrastructure, but could affect operations and infrastructure during work-in-progress.

5.18.3.4 The Airport director is to inform GACA Aviation Standards of forthcoming projects and changes within a reasonable time period.

5.18.3.5 An Initial Development Meeting (IDM) is to be arranged by the Airport Project Manager to brief GACA on the project. Where possible, all aspects of the development should be covered at the IDM, including scheduling. Minutes of the meeting are to be produced by the Project Manager and agreed by all parties.

5.18.3.6 Whenever a project is proposed, it is essential to establish whether it will result in a change to the established operating procedures at the aerodrome. It is therefore imperative that the management of any change is performed according to ALULA International Airport's SMS and that the project documentation reflects this.

5.18.3.7 When considering the project, it is important that at an early stage, the Project Manager undertakes a hazard identification and risk assessment to identify any potential hazards and associated risks surrounding any proposed changes.

5.18.3.8 The following documents are required to be submitted to GACA aviation standards for seeking the approval for execution of works:

5.18.3.8.1 Letter of Formal Proposal;

5.18.3.8.2 Project overview;

5.18.3.8.3 Compliance matrix, to demonstrate that the project design meets regulatory requirements. For example, this should be specific to (as applicable):

- a. Physical dimensions, strength and slopes;
- b. Clearance distances;
- c. Pavement markings, applicability, location and characteristics;
- d. Signs applicability, location and characteristics;
- e. Airfield lighting, applicability, location and characteristics; and
- f. Obstacle control – protection of OLS;
- g. Scaled drawings.

5.18.3.9 When compliance has been achieved to the satisfaction of GACA aviation standards, a Letter of No Objection will be provided confirming that the project is compliant with regulatory requirements. However, if any changes are proposed to the design or build, the modified information must be notified immediately to GACA aviation standards for further assessment as GACA accept any modification to change projects.

5.18.3.10 Following the completion and acceptance of the development design, the Airport director must demonstrate through the submission of a safety case (assessment) to GACA aviation standards, that the project will be managed safely.

5.18.3.11 All members of the project management team are to have clearly defined responsibilities and accountabilities in the project. During construction at ALULA International Airport safety levels and standards of conduct must be maintained. It is important that accurate, up-to-date information is made available to all stakeholders involved in the project, including GACA aviation standards - both as part of the project planning and during the work itself.

5.18.3.12 Careful planning and robust operational procedures need to be established to ensure that the change is introduced safely and efficiently.

5.18.3.13 On completion of the project, but prior to operational use, the Airport director is to seek approval from GACA aviation standards.

#### **5.18.4 Aerodrome works execution (control/ operational requirements/ promulgation/ notification/ liaising/ reporting)**

5.18.4.1 An AIP-SUP is required for major works that temporarily affect the published AIP or when works affect the movement area. [Note: Minor works, Time limited works or emergency repairs are excluded].

5.18.4.2 An AIC is required for information purposes and is to be used for works that do not change the published AIP or affect the movement area. [Note: Time limited works or emergency repairs are excluded].

5.18.4.3 The Project manager is to draft the AIP-SUP/ AIC and then forward a copy to the Operations Supervisor. And he will arrange for the issue of an AIP-SUP/ AIC through the AIM.

5.18.4.4 If a change to the AIP-SUP/ AIC is required after or during the commencement of works, the Project manager is to notify the Airport Operations Supervisor of the change. The Airport Operations Supervisor is then to contact AIM and formalize the changes required for the AIP-SUP/ AIC.

5.18.4.5 All scheduled airfield works require a work permit and may require a NOTAM. In general, works requiring a NOTAM include partial or complete runway or taxiway closures, or those works which will cause restrictions to aircraft operations. For works that do not disrupt aircraft operations a NOTAM is not required.

5.18.4.6 In relation to the procedure for the taking over of an area for planned works, the following steps apply:

- a. The Operation Supervisor shall liaise with FRCC for taking over of the area;
- b. Immediately after getting notification from FRCC, the Operation Supervisor arranges to ensure that the area defined is closed and marked accordingly and thereafter permit the manpower, machinery and material to enter the area under ALULA International Airport Operations supervision;
- c. The Airport project manager will provide obstruction/ closure markers for day and night time as required.

5.18.4.7 SOP\_OEAO ADM\_01\_007, Marking of Unserviceable Areas describes the measures to take in marking unserviceable areas.

5.18.4.8 Pavement markings leading into works area must be removed to eliminate possible confusion for pilots taxiing on the movement area.

5.18.4.9 Runway or taxiway lights in a works area, or leading into the works area must be extinguished or blanked out regardless of the duration of the closure.

5.18.4.10 Concrete barriers may be used as a barrier to delineate the limits of the work site on taxiways or aprons. Concrete barriers are not to be used within runway strips as they are not considered frangible barriers. Standard white-red-white cone markers must be used in the interest of aircraft safety when frangibility has to be considered. Concrete barriers must be installed with alternating red/ white components.

5.18.4.11 Work limit lights are provided to indicate to persons associated with the works organization the limit of the works area. Work limit lights must be portable, amber/ yellow/ orange lights of a standard type commercially available as works warning lights. The Operation Supervisor is to ensure all lights installed are operating.

5.18.4.12 Vehicles and plant used in carrying out aerodrome works day or night must be marked using a flashing beacon mounted on the top of the vehicle/ plant. The lights must be amber/ yellow/ orange, and be flashing or rotating of a standard type commercially available as an automobile accessory.

5.18.4.13 In relation to the procedure for the handing over of a repaired area, the following steps apply:

- a. The Operation Supervisor is to carry out an interim inspection of the site where work is in progress together with the Project Officer (or manager responsible for the works), preferably after a lapse of 60 per cent of the NOTAM period, to ascertain whether any extension of the NOTAM period is necessary. If so, the appropriate coordination with FRCC / AIM will be undertaken for an extension of the NOTAM. As far as possible an extension of the NOTAM period should be avoided;
- b. At least two hour prior to expiry of the scheduled NOTAM period an inspection is to be undertaken by the Operation Supervisor to ensure that the works party is able to complete the work and is in a position to meet the stipulated handover time;
- c. In case there is a necessity for extending the NOTAM period, the Operations Supervisor will liaise with FRCC immediately;
- d. If the work is to be completed on schedule (whether a NOTAM exists or not), the Operations Officer is to inspect the site and associated areas for the on-time handover of the repaired area;
- e. Arrangements are to be made by the Operations Officer to remove the obstructions/ unserviceability markers to facilitate the on-time handover;
- f. The Project Officer (or manager responsible for the works) is to ensure that the repaired site and associated areas are satisfactory in all respects for safe aircraft operations before the areas are finally handed over;
- g. After completion of the above steps, FRCC is to be informed of handing over the repaired area. FRCC acknowledgement is to be sought by the Operations Officer; and
- h. All concerned Officers will maintain a detailed log of handing/ taking over of the area in accordance with the Work Permit.

5.18.4.14 The purpose of the Non-Compliance Report (NCR) is to establish a formal reporting system of breaches by any works organization during the period of works. This is achieved by completing a non-compliance and corrective action report in accordance with SOP\_OEAO\_ADMIN\_01\_011, Non Compliance and Corrective Action Reports.

5.18.4.15 The Airport Operations Officers are responsible for monitoring work sites or areas, ensuring that the works party does not compromise the safety to aircraft operations. Should the conduct or the completion of works not comply with conditions contained in the work permit, the Operations Officer is to issue verbal directions to rectify the situation. Should the situation not be immediately resolved by the works party, the appropriate safety measures are to be taken, and a NCR issued by the Operations Officer and submitted to the Operations Supervisor for investigation and remedial action with the Project Officer (or manager responsible for the works).

5.18.4.16 All NCR records are to be maintained in the office of the ALULA International Airport Operations Supervisor.

### **5.18.5 Personnel**

5.18.5.1 Operation staff needs to be deployed at the airport after getting requisite training, for monitoring of the aerodrome works. Operation supervisor is required to maintain the records of such persons.

### **5.18.6 Contractor Safety Plans**

5.18.6.1 Contractors are required to submit a pre-works report covering their planned activities relating specifically to the management of risks for the duration of any works performed on the movement area.

### **5.18.7 Emergency Repairs**

5.18.7.1 Emergency works/ repairs requiring immediate attention in unforeseen circumstances are to be advised by NOTAM. The NOTAM request is to be initiated by the ALULA International Airport Operation Supervisor.

5.18.7.2 Works completed without disrupting normal aircraft operations and during which the works area can be reinstated to normal safety standards are permitted without a NOTAM. Time limited works in this category include such things as grass mowing, rolling surfaces, pavement sweeping, minor repairs to pavements, maintenance of markings, markers and lights, surveys and inspections.

5.18.7.3 The ALULA International Airport Operations Supervisor is to initiate action for raising a NOTAM at least 48 hours, where practicable, prior to the proposed work to minimize disruption to aircraft operations.

5.18.7.4 Aerodrome Reporting contains information required to originate a NOTAM. Operation supervisor is to contact FRCC / AIM to determine the arrangements required before the commencement of time limited works.



# AERODROME MANUAL

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## PART 6 - Safety Management System

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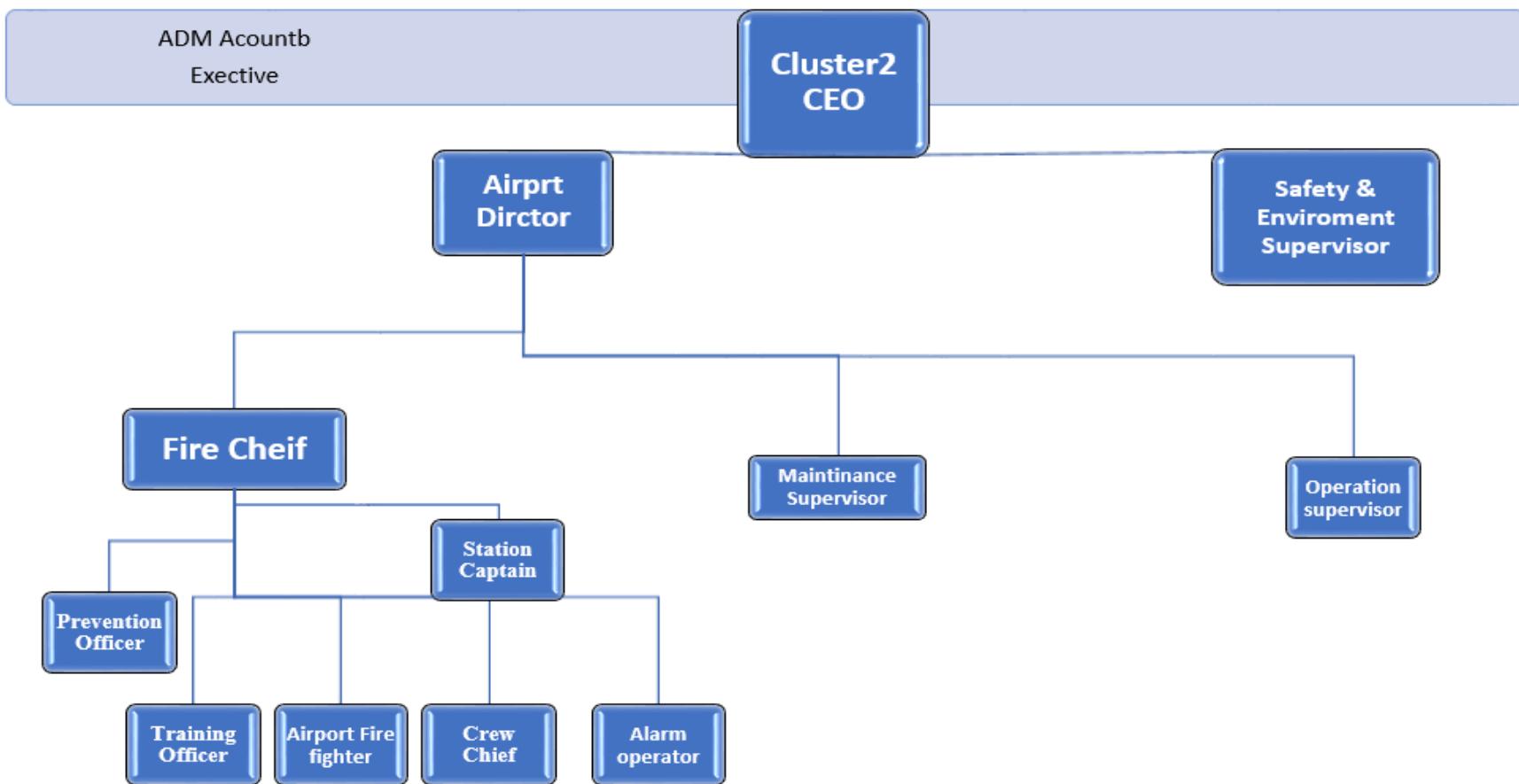
## **Part 6 – Safety Management System**

**See Safety Management System Manual (SMS) (Separate document)**

## Appendix A. Organizational chart

This Appendix of the Aerodrome Manual includes the aerodrome administration requirements as required by GACA Regulation Part 139 R8 Certification of Aerodromes.

OEAO Organization chart



## Appendix B. Names, roles and telephone numbers of persons responsible

Area of Responsibility	Responsible ALULA International Position	Person Responsible	Phone	Date Updated	Updated by
Promulgation of aeronautical information	Airport Director	Abdulwahab Bokhari	0530049090		
Control of access	Airport Director	Abdulwahab Bokhari	0530049090		
Emergency Planning	Fire Chief	Adnan Abed aloufi	0549992909		
Rescue and firefighting services (RFFS)	Fire Chief	Adnan Abed aloufi	0549992909		
Inspections of the movement area	Maintenance Manager	Mohammed Aljehani	0581047450	01.03.2023	Mujahed Alnsari
Maintenance of the movement area	Maintenance Manager	Mohammed Aljehani	0581047450	01.03.2023	Mujahed Alnsari
Apron management	Operations Supervisor	Rami alhazmi	0542063344	01.29.2023	Mujahed Alnsari
Apron safety management	Safety& Environment Supervisor	MUJAHED M. ALNSARI	0554367159		
Vehicles on the movement area	RSAF	Majeed Alenazi	0555205194		
Obstacles	Safety& Environment Supervisor	MUJAHED M. ALNSARI	0554367159		
The removal of a disabled Aeroplane	Operations Supervisor	Rami alhazmi	0542063344		

<b>Area of Responsibility</b>	<b>Responsible ALULA International Position</b>	<b>Person Responsible</b>	<b>Phone</b>	<b>Date Updated</b>	<b>Updated by</b>
Low visibility operations	Operations Supervisor	Rami alhazmi	0542063344		
Protection of site for radar , navigation aids, and meteorological equipment	Maintenance Manager	Ziyad Alharbi	0565696305		
Aerodrome Works- Safety Runway Safety team - Safety	Safety& Environment Supervisor	MUJAHED M. ALNSARI	0554367159		
APESCO	Focal Point	Muhammed Aljehani	0565288806	01.29.2023	Mujahed Alnsari
Maintenance Contractor Manager	Maintenance Manager	Ziyad Alharbi	0565696305	01.29.2023	Mujahed Alnsari
SITA	Focal Point	Farhan Ghufran	0550549712		
FBO HANGAR (operated by SAUDI GROUND SERVICES SGS)	TBA	TBA	TBA	01.29.2023	Mujahed Alnsari

Table 2: Table of persons responsible

## Appendix C. Aeronautical Information Publication (OEAO ICAO Code)

AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA		
1	ARP coordinates and site at AD	262859N 0380707E 124 / 1 525M FM THR12
2	Direction and distance from (city)	050 , 25KM FM ALULA
3	Elevation/Reference temperature	2046 ft
4	Geoid undulation at AD ELEV PSN	42ft at ARP
5	MAG VAR/Annual change	3°E (2010) / 2.9
6	AD Administration, address, telephone, telefax, telex, AFS	MATARAT Cluster2 company Alula International Airport. ALULA Saudi Arabia Tel:+966 14 8847100 Fax:+966 14 8847107 Telex:Nil  AFS:Nil
7	Types of traffic permitted (IFR/VFR)	IFR and VFR
8	Remarks	AFIS. for more INFO, contact TEL: +966 14 8847102.  AFIS for a specific period announced by NOTAM

AD 2.3 OPERATIONAL HOURS		
1	AD Administration	HS SUN - SAT 05:00 -13:00 (0800-1600 LMT )
2	Customs and immigration	H24
3	Health and sanitation	(First Aid) during scheduled flight.
4	AIS Briefing Office	NIL
5	ATS Reporting Office (ARO)	NIL
6	MET Briefing Office	HO
7	ATS	NIL
8	Fueling	YES (Fuel tracks) On request
9	Handling	On request
10	Security	H24
11	De-icing	NIL
12	Remarks	H24

AD 2.4 HANDLING SERVICES AND FACILITIES		
1	Cargo-handling facilities	NIL
2	Fuel/oil types	Jet A1 aviation fuel Available AVGAS fuel Available Oil type / NIL
3	Fueling facilities/capacity	Tanker (Fuel truck) - Delivery rate variable (MAX 15 liter/second) Jet A1 capacity is 100,000 liters AVGAS capacity is 2,000 liters The minimum uplift for AVGAS is 200 liters
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	Private Aviation Hangar is available, prior arrangement for use and aircraft storage is required 24hrs before arrival (See AD 2.23).)
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

**AD 2.5 PASSENGER FACILITIES**

1	Hotels	In the city , reservation at AD
2	Restaurants	AT AD
3	Transportation	TAXI – RENTAL CAR
4	Medical facilities	CLINIC FOR FIRST AID
5	Bank and Post Office	IN THE CITY
6	Tourist Office	NIL
7	Remarks	NIL

**AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

1	AD category for fire fighting	CAT 8 Capability for upgrade to CAT 9 upon request 72 hours before arrival
2	Rescue equipment	YES
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

**AD 2.7 SEASONAL AVAILABILITY - CLEARING**

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	NIL

AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA		
1	Apron dimensions, surface and strength	Surface: Concrete Strength: 86/R/B/W/T
2	Taxiway width, surface and strength	TWY A and B Width: 23 M TWY A and B Surface: Asphalt TWY A Strength: 80/F/B/X/T TWY B, A2, A3, A4, B2, B3 and B4 Strength: 79/F/B/X/T TXY W5 : asphalt, Strength 59/F/A/X/U
3	Altimeter checkpoint location and elevation	NIL
4	VOR checkpoints	NIL
5	INS checkpoints	NIL
6	Remarks	TXL W5 only Code C

AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	<ul style="list-style-type: none"> <li>• Taxing guidance signs at intersection with connecting TWY and RWY and at holding position.</li> <li>• Distance markers at RWY track.</li> <li>• Guide lines at apron.</li> <li>• Nose-in guidance at aircraft stands.</li> </ul>
2	RWY and TWY markings and LGT	<ul style="list-style-type: none"> <li>• RWY Marking: Designation, THR, TDZ, Center Line, RWY Edge and RWY End, pre THR</li> <li>• RWY Lighting: Edge, Runway end and Threshold.</li> <li>• TWY Marking: CL, Edge, WY/RWY intersection, Holding Position</li> <li>• TWY Lighting: EDGE, Guidance sign</li> </ul>
3	Stop bars	NIL
4	Remarks	NIL

AD 2.10 AERODROME OBSTACLES				
In approach/TKOF areas			In circling area and at AD	
1			2	
RWY NR/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates
A	B	C	A	B
RWY 12	Ttrain-2405 FT White Flashing Light, Medium Intensity	N26°27'48" E036°10'12'	NIL	
RWY 30	Ttrain-2333 FT White Flashing Light, Medium Intensity	N26°30'20" E036°04'32'	NIL	
RWY 30	Ttrain-2655 FT White Flashing Light, Medium Intensity	N26°31'00" E036°04'30'	NIL	
(Runway name)				
See Aerodrome Obstacle Charts ICAO - Type A and Precision Approach Terrain Charts - ICAO.				

AD 2.11 METEOROLOGICAL INFORMATION PROVIDED																								
1	Associated MET Office						(AL UAL) / (ALULA International Airport)																	
2	Hours of service MET Office outside hours						HO																	
3	Office responsible for TAF preparation Periods of validity						Jeddah Central Forecast Office (CFO) (TAF periods of validity H30). Tel:+966 12 6532173 and +966 12 6532173 Fax:+966 12 6530197																	
4	Type of landing forecast Interval of issuance						NIL																	
5	Briefing/consultation provided						NIL																	
6	Flight documentation Language(s) used						NIL																	
7	Charts and other information available for briefing or consultation						NIL																	
8	Supplementary equipment available for providing information						NIL																	
9	ATS units provided with information						NIL																	
10	Additional information (limitation of service, etc.)						Tel:00966148847115																	
METEOROLOGICAL DATA																								
MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURES (C)																								
TEMPERATURE	(month)	(month)	(month)	(month)	(month)	(month)	(month)	(month)	(month)	(month)	(month)	(month)												
MAXIMUM																								
MINIMUM																								

AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS						
Designations RWY NR	TRUE & MAG BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY	
1	2	3	4	6	7	
12	120° GEO 117° MAG	3050 X 45	60/F/B/X/T Asphalt	262923.21N 0380619.46E  GUND 42.25 FT	THR: 1 995 FT TDZ: 2018 FT	
30	300° MAG 297° MAG	3050 X 45	60/F/B/X/T Asphalt	262834.24N 0380755.24E  GUND 42.25 FT	THR: 2 046 FT TDZ: 2047 FT	
Slope of RWY- SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	Runway end safety Area RESA (M)	OFZ	Remarks
7	8	9	10	11	12	13
0.5%	120 X 45	240 X 150	3410 X 300	90X120	NIL	NIL .
0.5%	120 X 45	240 X 150	3410 X 300	90X120	NIL	

AD 2.13 DECLARED DISTANCES					
RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
12	3050	3290	3170	3050	NIL
30	3050	3290	3170	3050	NIL

AD 2.14 APPROACH AND RUNWAY LIGHTING									
RWY Designator	APCH LGT Type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
12	precision CAT I 900 M LIH	GREEN	PAPI 3° Both side	NIL	NIL	3050M 60M WHITE LIH	RED	NIL	Sequence flash light system ( SFLS ) in approach LGT.
30	precision CAT I 900 M LIH	GREEN	PAPI 3° Both side	NIL	NIL	3050M 60M WHITE LIH	RED	NIL	Sequence flash light system ( SFLS ) in approach LGT.

(ALULA International Airport Airport) AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY		
1	ABN / IBN location, characteristics and operational hours	ABN: On fire and rescue building , flashing green and white 24 flash/MIN 262848.49N 0380646.86E H24
2	LDI location and LGT Anemometer location and LGT	LDI: NIL WDI: Lighted
3	TWY edge and centre line lighting	LDI: NIL WDI: Lighted
4	Secondary power supply/switch-over time	7SEC
5	Remarks	Solar Beacons on mountains at north and south of RWY

**AD 2.16 HELICOPTER LANDING AREA**

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

AD 2.17 ATS AIRSPACE		
1	Designation and lateral limits	ATZ: A circle of radius 5 NM centered on 262938N 0380637E
2	Vertical limits	MSL TO 5500 FT
3	Airspace classification	G
4	ATS unit call sign Language(s)	NIL
5	Transition altitude	13000 FT
	Remarks	NIL

AD 2.18 ATS COMMUNICATION FACILITIES				
Service designation	Call sign	Frequency	Operational hours	Remarks
1	2	3	4	5
TIBA	TIBA	122.8 MHZ	H24	1-TIBA procedure must be followed.
AFIS	ALULA AFIS	Active by NOTAM	Active by NOTAM	2-Call RFFS at least 15 MIN before ARR time on FREQ 133.5

(ALULA International Airport International Airport) AD 2.19 RADIO NAVIGATION AND LANDING AIDS						
Type of aid, MAG VAR, CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DVOR/DME	AUH	114.9 MHZ CH 96X	H24	262817. 8N 0380826. 3E	2 100 FT	NIL

## **OEAO AD 2.20 LOCAL TRAFFIC REGULATIONS**

- 1) FOLLOW-ME service available upon request.
- 2) Marshaller Guidance and Instructions provided on Apron
- 3) TXW W5 ONLY CODE C
- 4) Private aviation hangar is located at 26 28 28.5 N 038 07 32.5 E with dimensions as follows:
  - Length: 45.5 x 78 m
  - Height: 14.0 m AGL
- 5) **Taxiing procedures** to and from private aviation hangar:  
**Taxiing procedures for departure flight**
  - Runway 30 in use: The aircraft must taxi via TWY A, then enter TWY A4 and taxi via taxiway B, B4 to holding point runway 30 or request FOLLOW-ME.
  - Runway 12 in use: The aircraft must taxi via TWY A, then enter TWY A3 and taxi via taxiway B3 to holding point runway 12 or request FOLLOW-ME.  
**Taxiing procedures for Arrival flight**
  - Runway 30 in use: The aircraft must vacate the runway via TWY B2, then enter TWY B and taxi via taxiway A4, A to TXY W5 or request FOLLOW-ME.
  - Runway 12 in use: The aircraft must vacate the runway via TWY B4, then enter TWY B and taxi via taxiway A4, A to TXY W5 or request FOLLOW-ME.

## **(ALULA International Airport) AD 2.21 NOISE ABATEMENT PROCEDURES**

**NIL**

## **(ALULA International Airport) AD 2.22 FLIGHT PROCEDURES**

**NIL**

## **OEAO AD 2.23 ADDITIONAL INFORMATION**

- 1) Ground handling services to aircraft at AlUla International Airport is provided in the private aviation hangar by (SGS).
- 2) The Private Hangar accommodates Category A and B aircraft and is fully equipped to provide relevant ground and long-term parking services to visiting aircraft.
- 3) List of Services Available for private aviation hangar are:
  - Lavatory Service Truck
  - Water service
  - Dry wash
  - Wet wash
  - Tow and Push Back Services in/out of the Hangar -
  - Cleaning
  - Ground Power Unit (GPU)
  - Windshield Cleaning
  - Wing walker
  - Headset Service
  - Wheel Chocks
  - Baggage Services • Marshalling)
- 4) SGS provides services for Private Hangars and requires prior notification on
  - Name: Raed A. Alayda
  - Position: Station Duty Manager
  - Contact Number: +966 54 666 6061

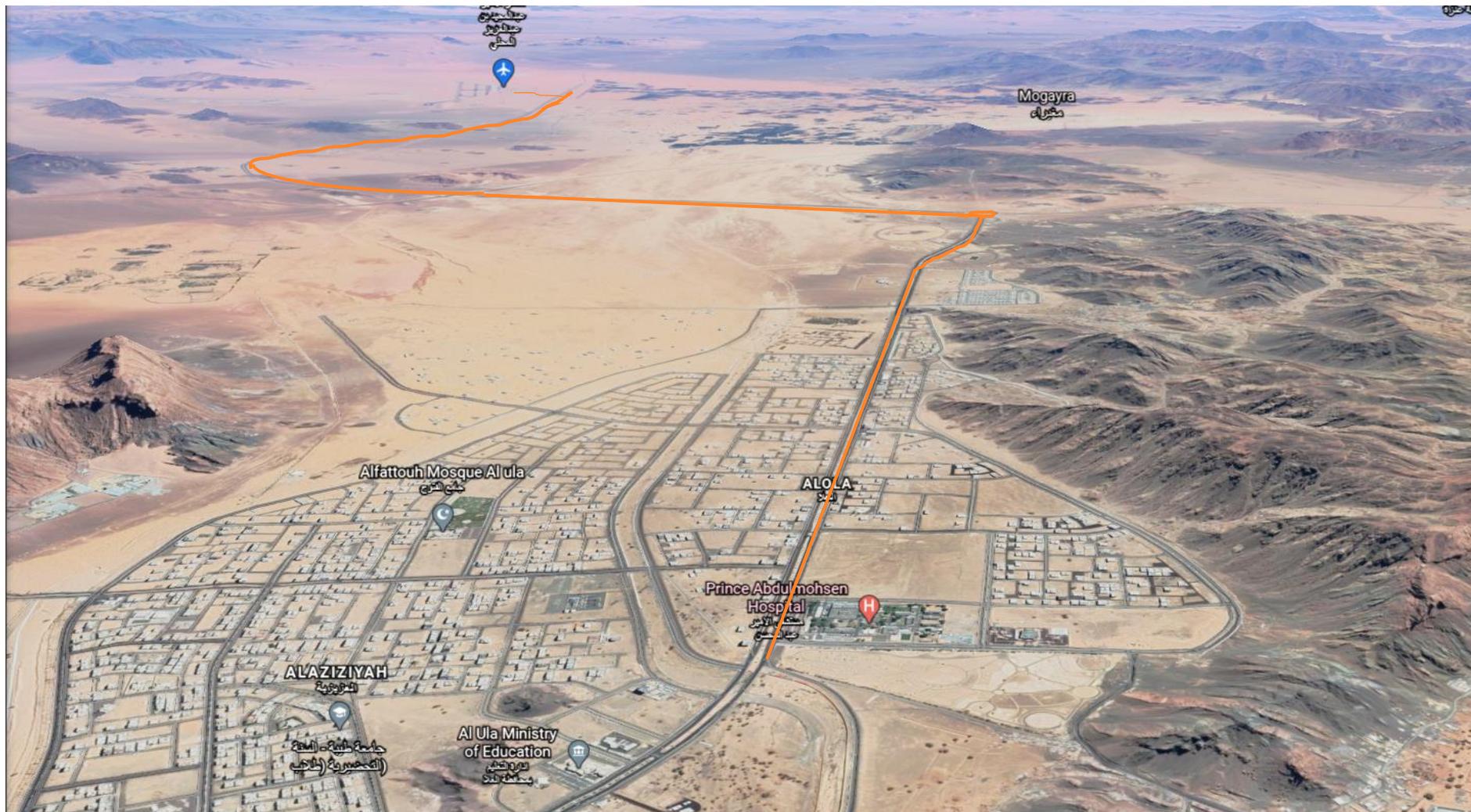
Email Address: [lcuh@saudiags.com](mailto:lcuh@saudiags.com)

## Appendix D Aerodrome Plans and map:

(ALULA International Airport) AD 2.24 CHARTS RELATED TO AN AERODROME	
Chart Name	Page
Aerodrome chart	123
Aircraft parking / docking chart - ICAO	123
VOR / DME RWY 12	124
VOR / DME RWY 12 (Data tabulation)	124
VOR / DME RWY 30	125
VOR / DME RWY 30 (Data tabulation)	125
RNAV ( GNSS ) RWY 12	126
RNAV ( GNSS ) RWY 12 (Data tabulation)	126
RNAV ( GNSS ) RWY 30	127
RNAV ( GNSS ) RWY 30 (Data tabulation)	127

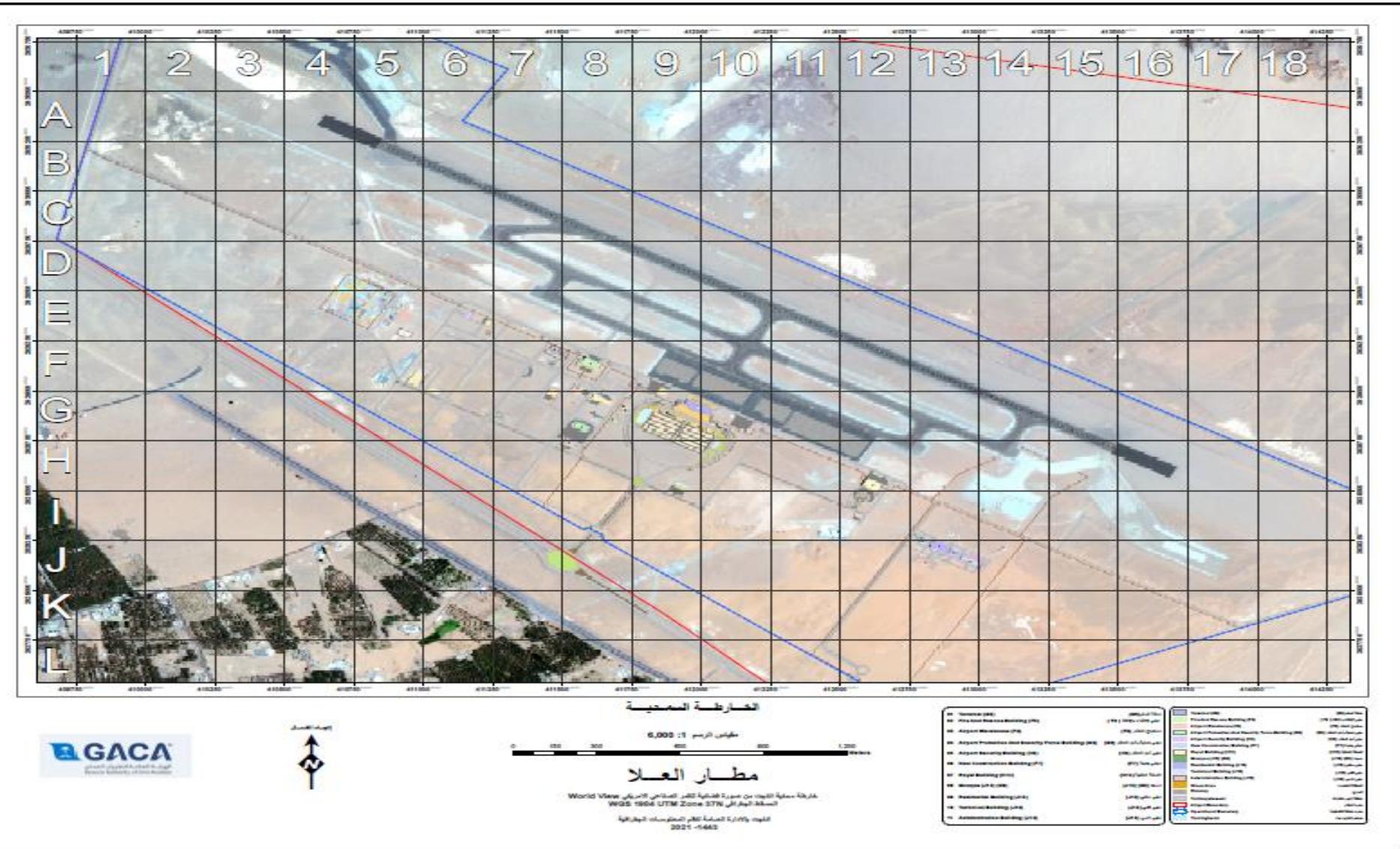
## Appendix D1

### Aerodrome Location:



## Appendix D2

### Airport Grid MAP:



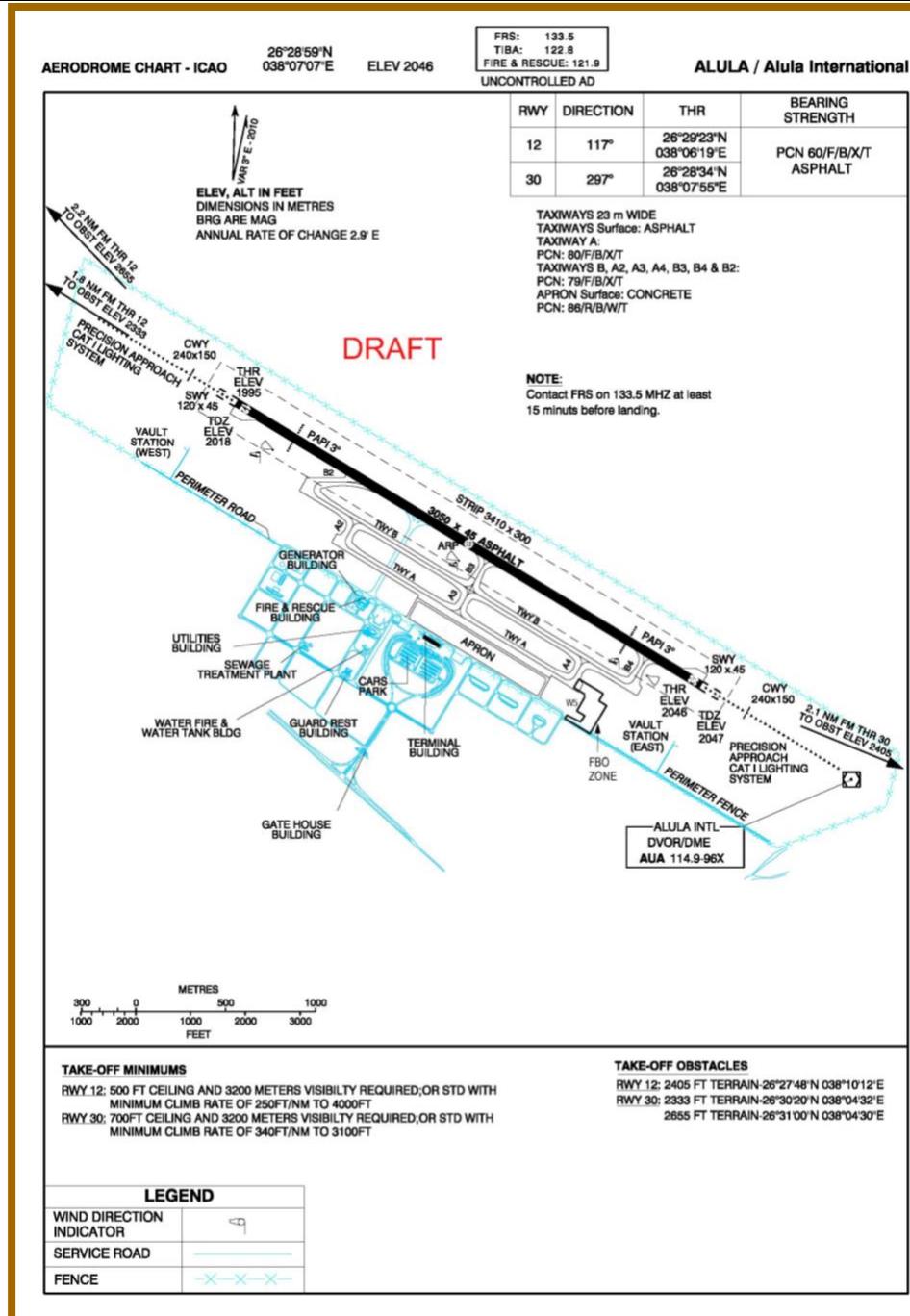
### **Appendix D3**

**Airport Geographic location:**



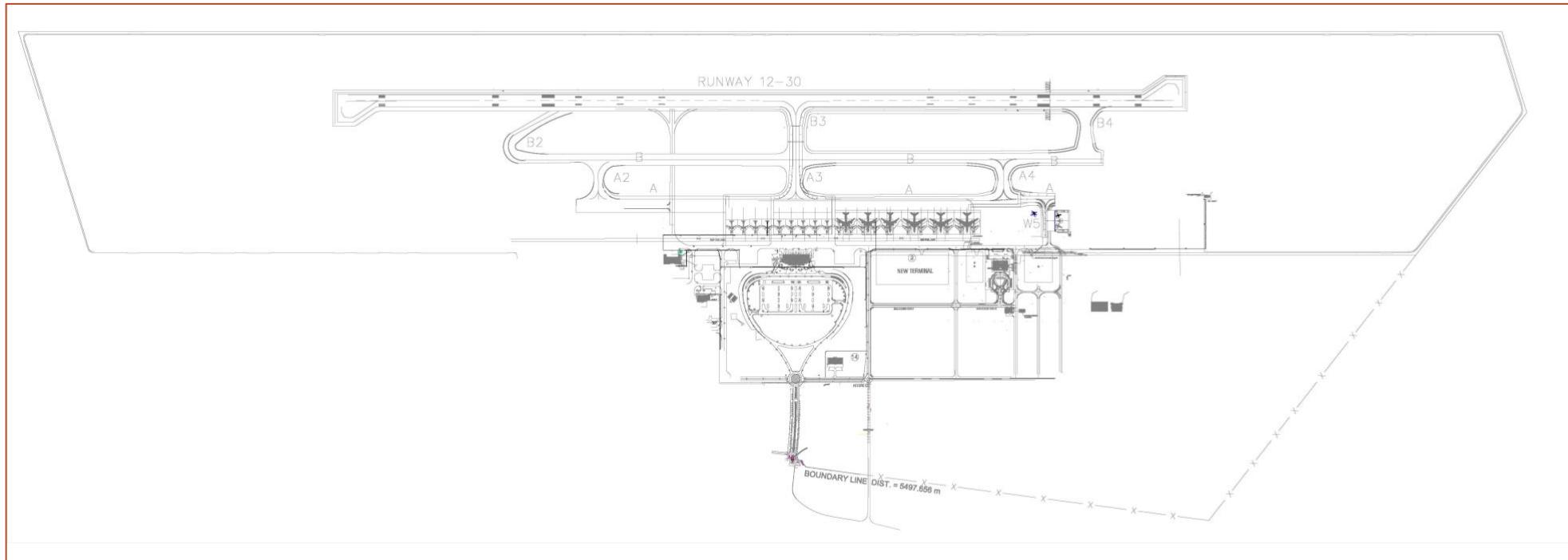
## Appendix D4

### AERODROME CHART – ICAO:

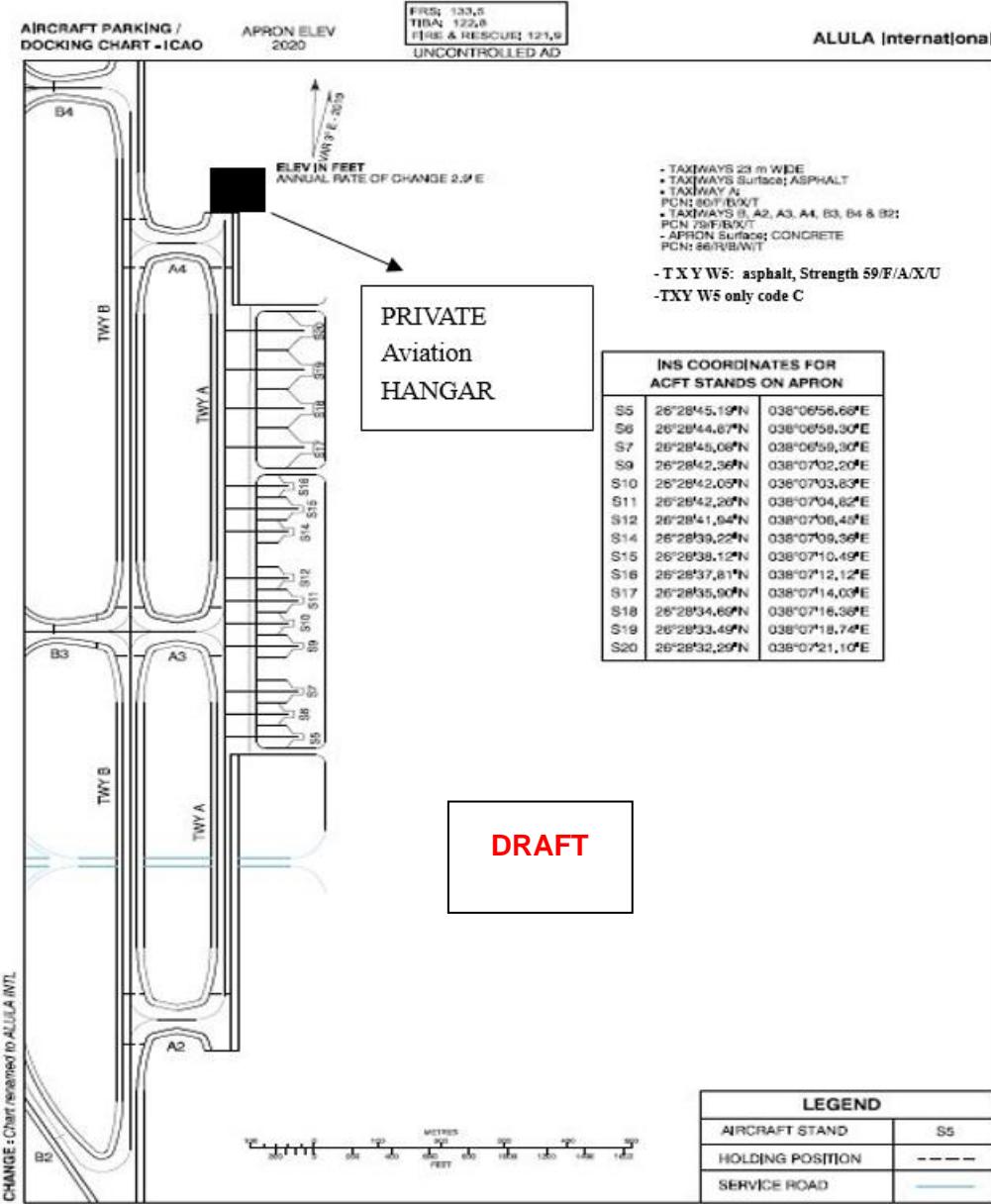


## **Appendix D5**

### **GENERAL AIRPORT LAYOUT**

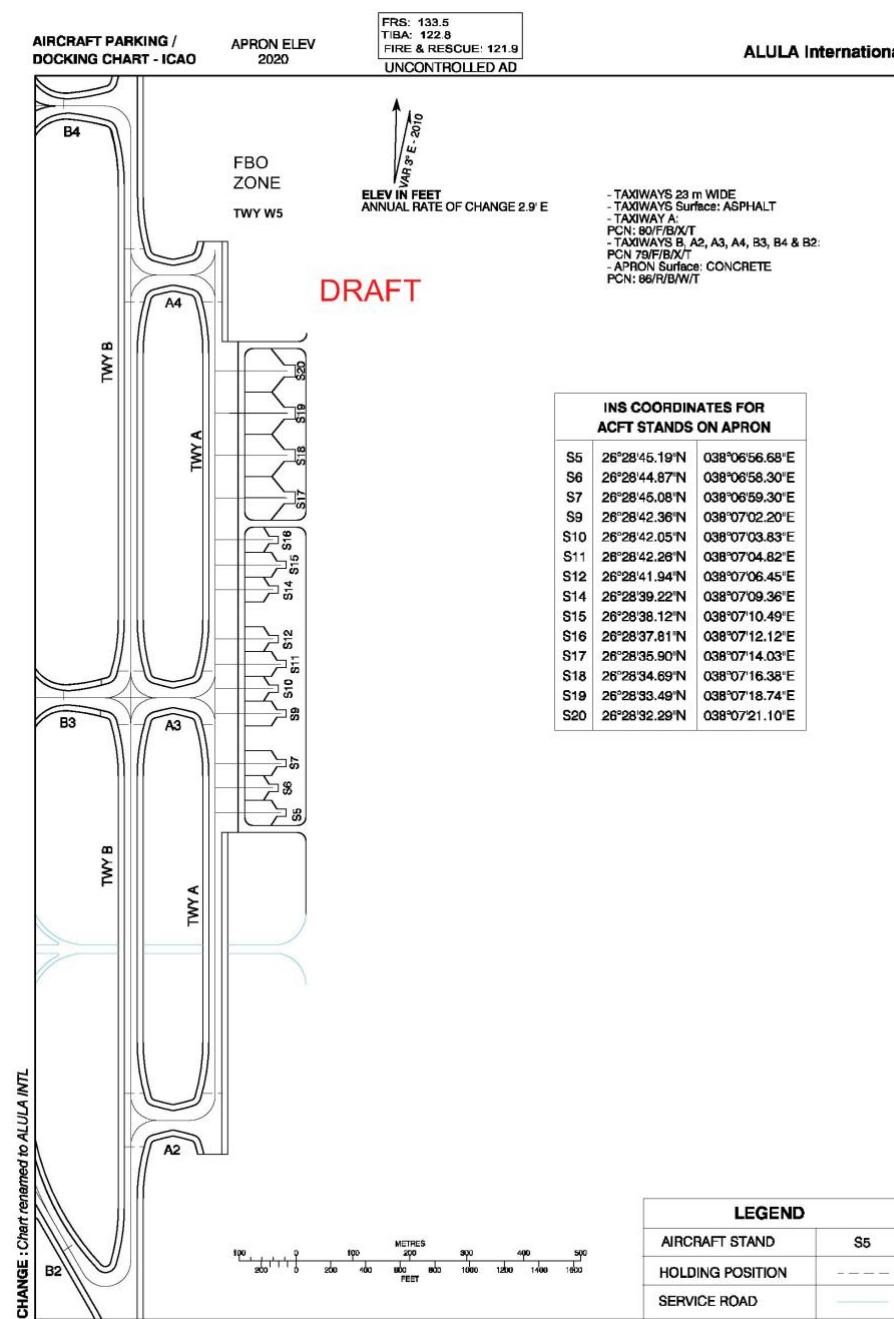


## Appendix D6 Taxiways, Taxilane and Aircraft stands naming



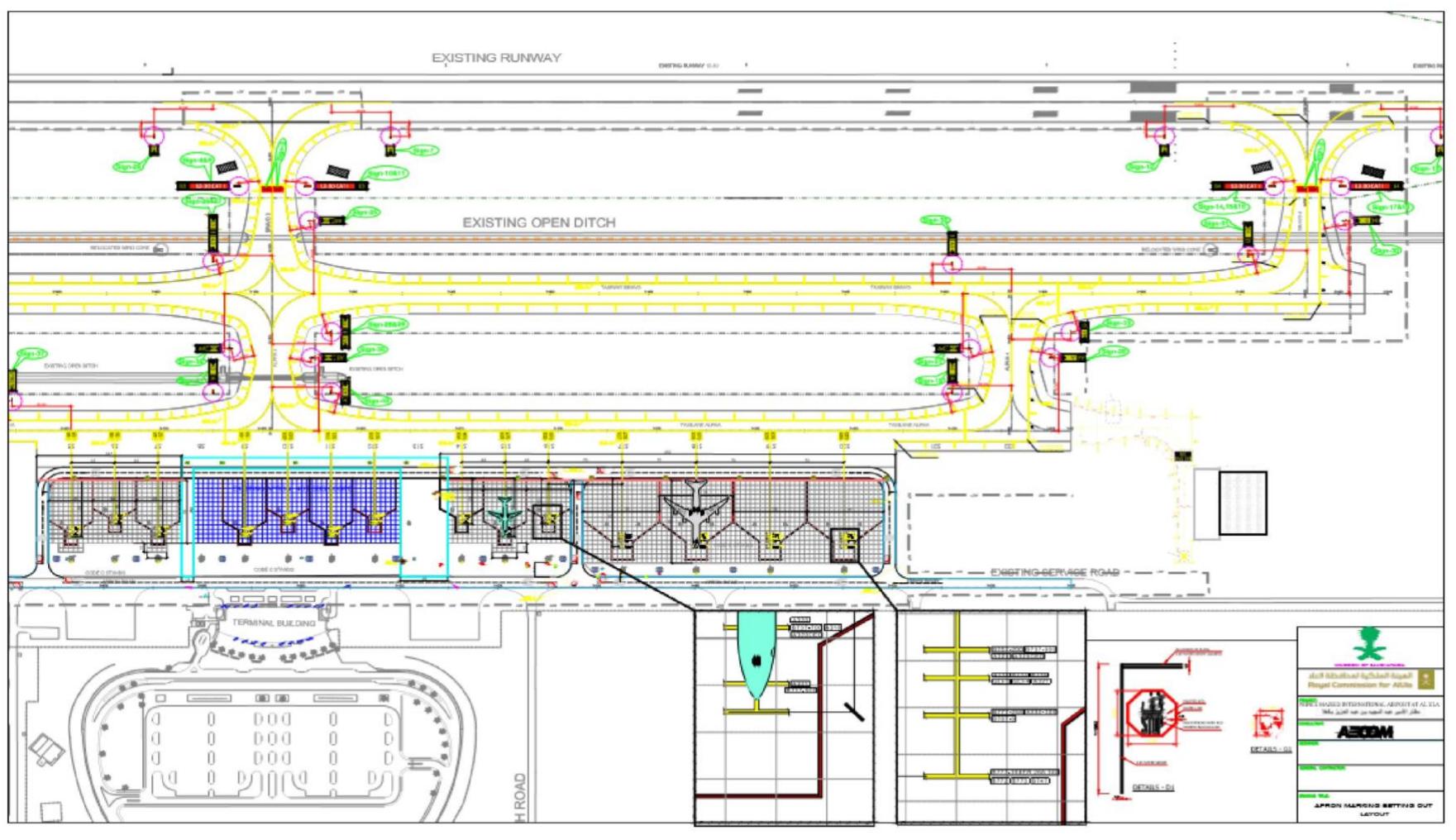
## Appendix D7

### DOCKING CHART – ICAO:



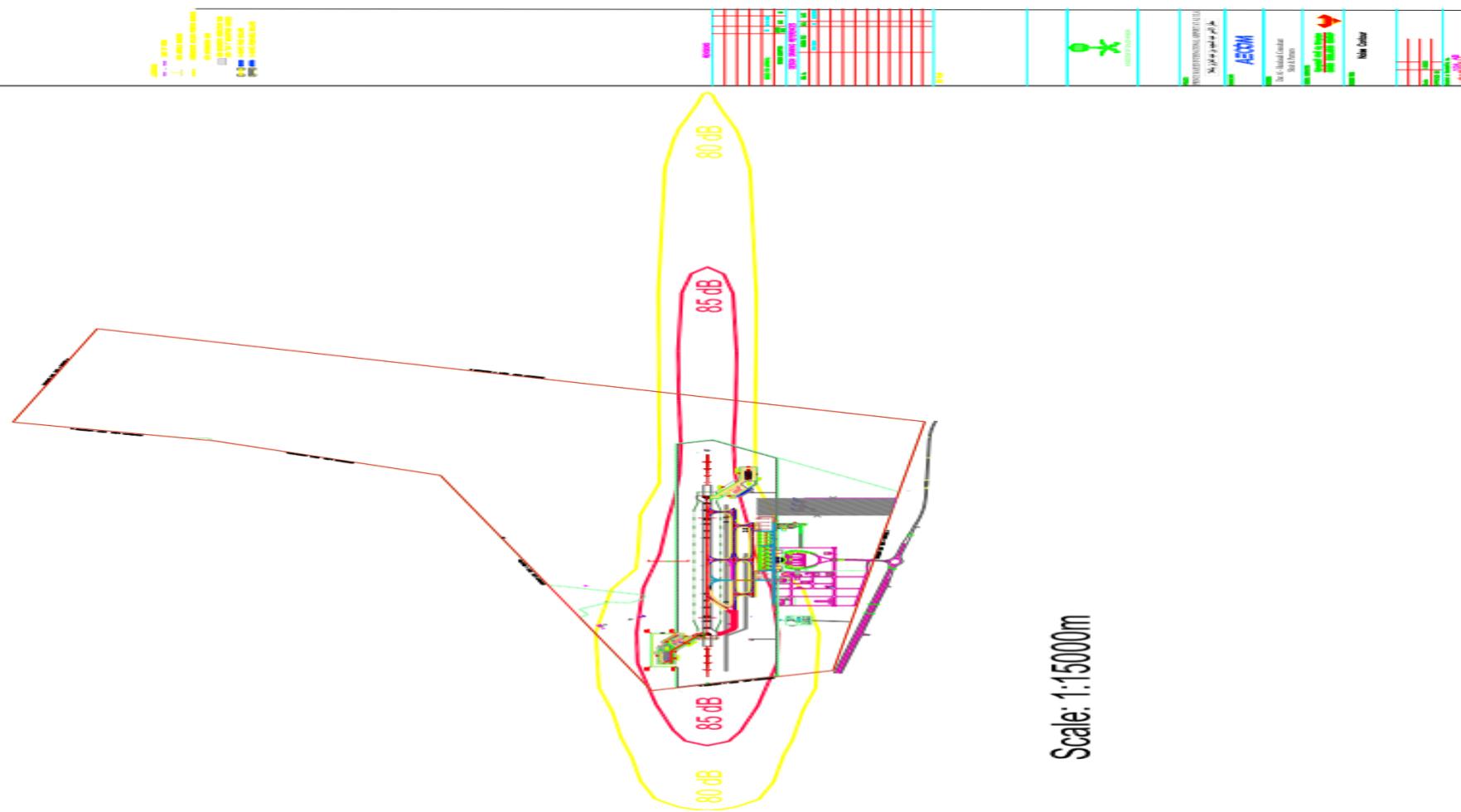
## **Appendix D8**

### **APRON MARKING**



## **Appendix D9**

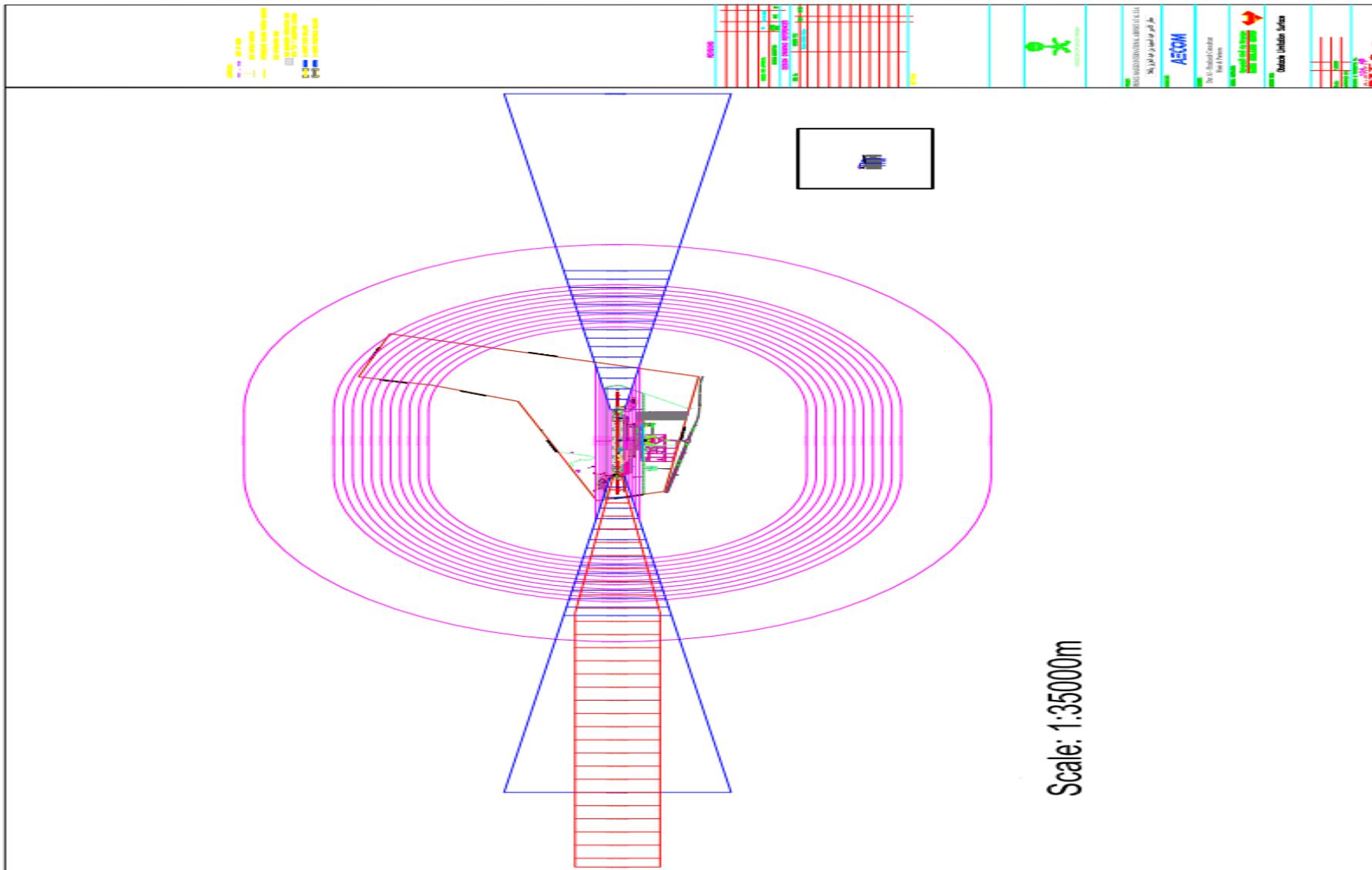
### **NOISE CONTOUR**



Scale: 1:15000m

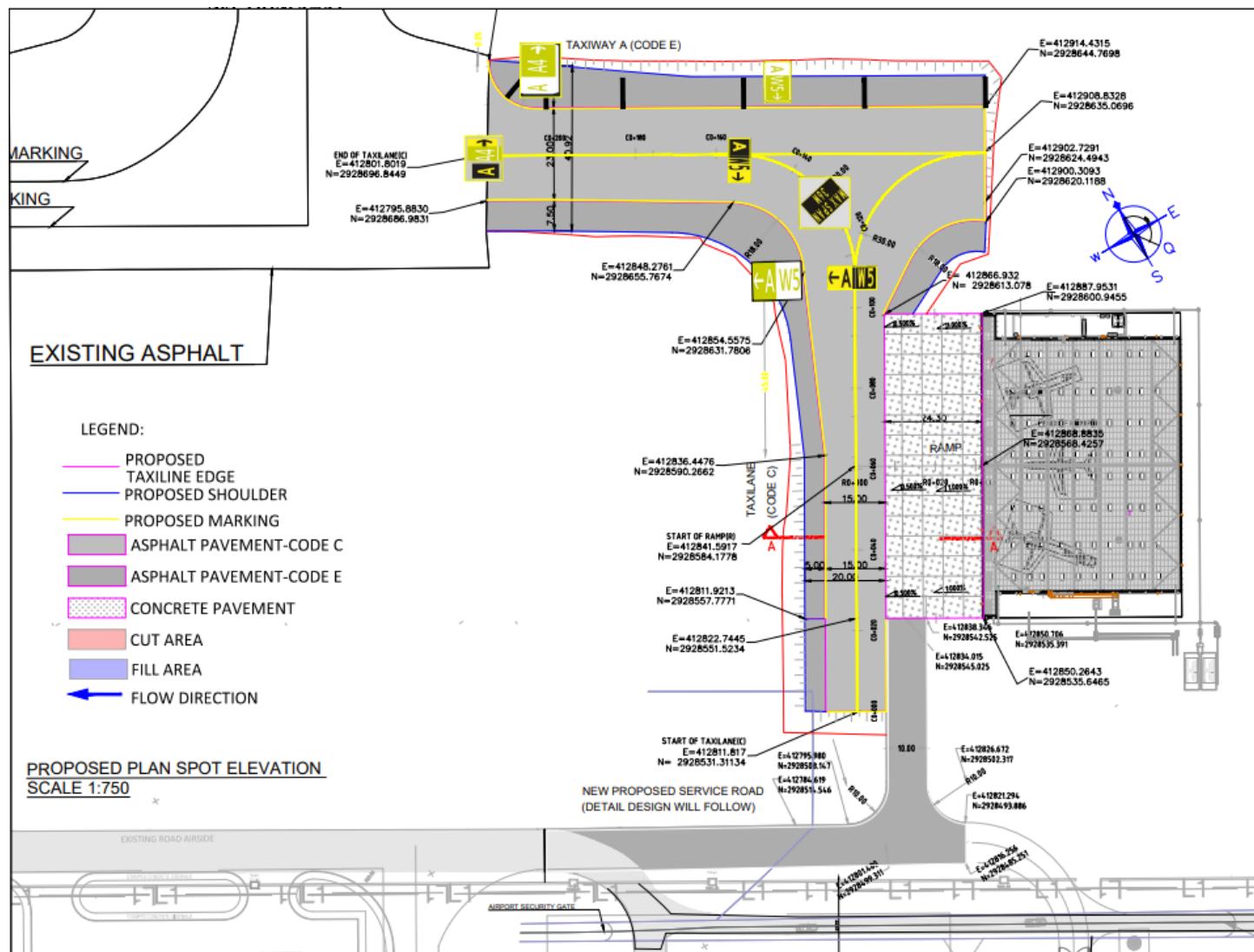
## **Appendix D10**

### **OBSTACLE LIMITATION SURFACES (OLS)**



## Appendix D11

### New TXY 5 and FBO Hangar

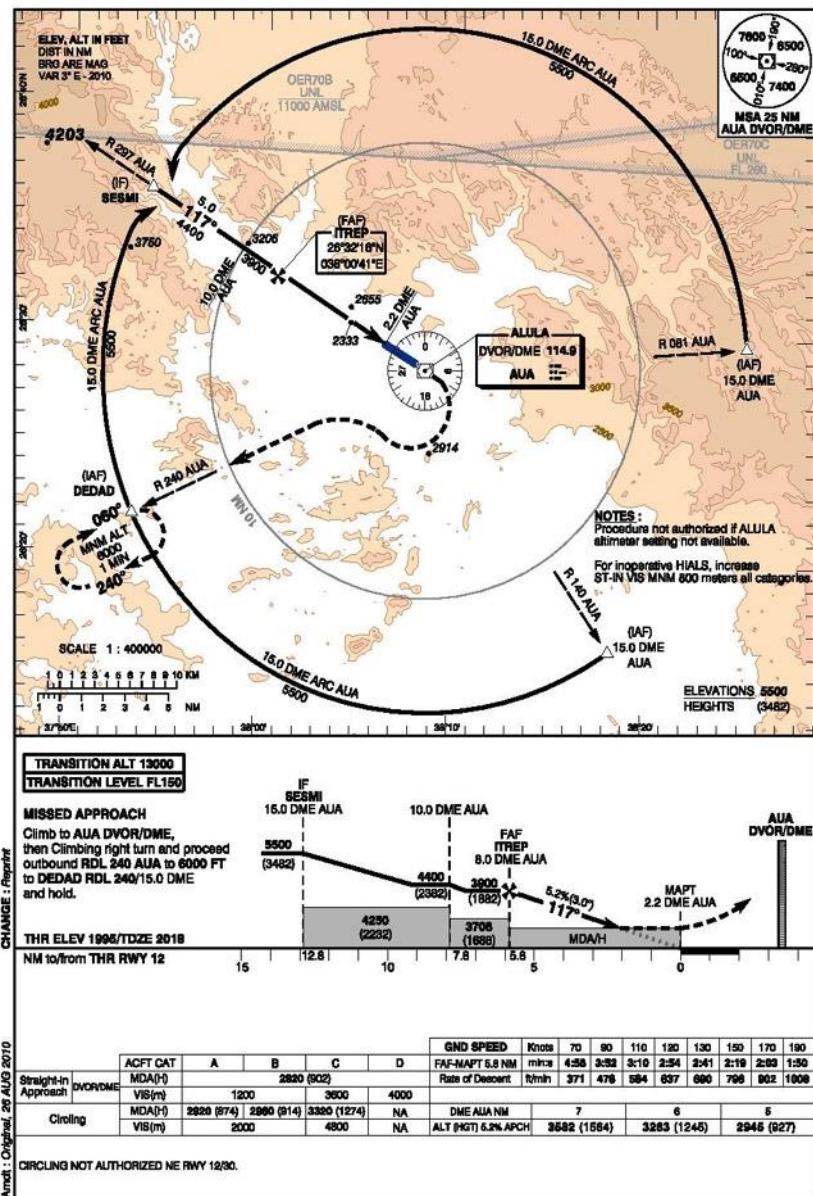


INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 2046 ft  
HEIGHTS RELATED TO  
TDZ RWY 12 - ELEV 2018 ft

FIRE & RESCUE 121.9  
UNCONTROLLED AD

ALULA/Prince Abdulmajeed  
Bin Abdulaziz (OEAO)  
VOR/DME RWY 12



ALULA/Prince Abdulmajeed  
Bin Abdulaziz (OEAO)  
VOR/DME RWY 12

AERONAUTICAL DATA TABULATION

VOR/DME approach to RWY 12 from AUA DVOR/DME	
Fix/point	Coordinates
DEDAD (IAF/MAHF) - RDL 240/15.0 DME AUA	26°21'27.6"N 037°53'33.9"E
SESMI (IF) - RDL 297/15.0 DME AUA	26°35'43.4"N 037°53'53.7"E
ITREP (FAF) - 8.0 DME AUA	26°32'15.8"N 038°00'41.3"E
AUA DVOR/DME	26°28'17.8"N 038°08'26.3"E
THR RWY 12	26°29'23.21"N 038°08'19.46"E

CHANGE : Original

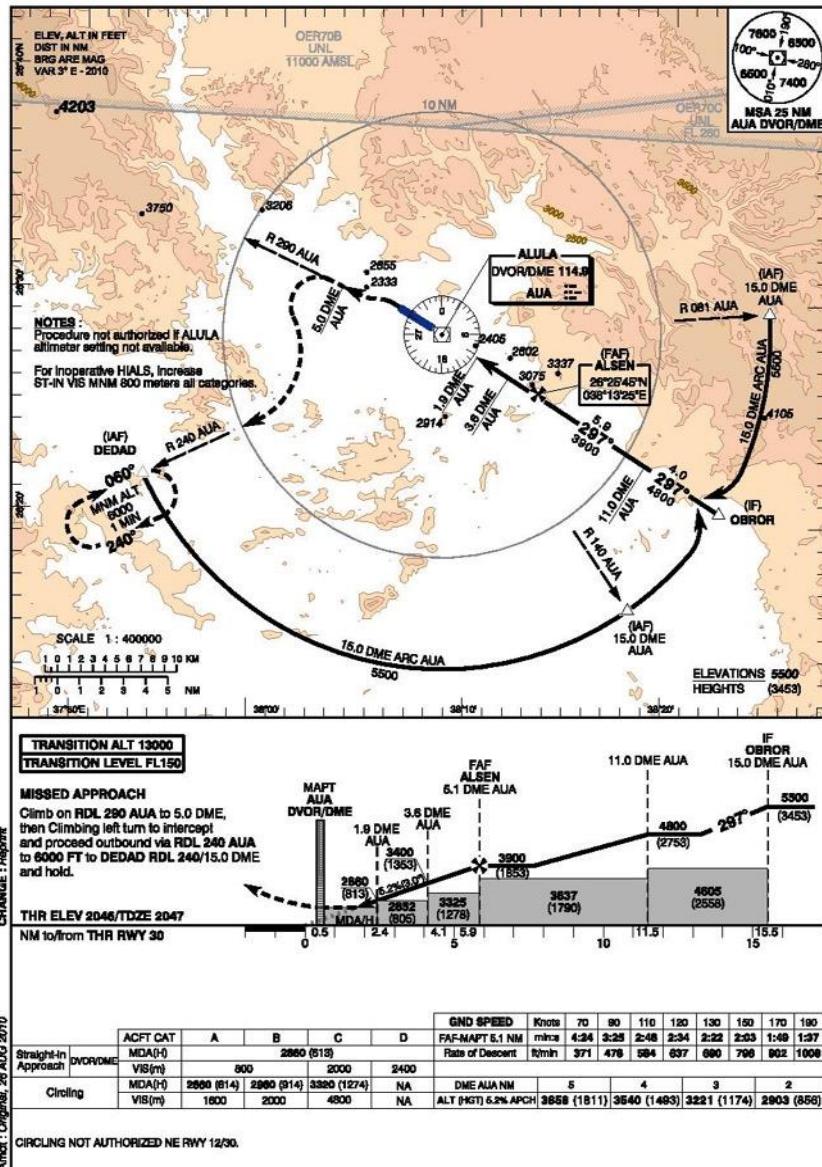
Amendt : Original, 26 AUG 2010

INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 2046 ft  
HEIGHTS RELATED TO  
TDZ RWY 30 - ELEV 2047 ft

FRS : 133.5  
TBA : 122.8  
FIRE & RESCUE 121.9  
UNCONTROLLED AD

ALULA/Prince Abdulmajeed  
Bin Abdulaziz (OEAO)  
VOR/DME RWY 30



ALULA/Prince Abdulmajeed  
Bin Abdulaziz (OEAO)  
VOR/DME RWY 30

AERONAUTICAL DATA TABULATION

VOR/DME approach to RWY 30 from AUA DVOR/DME	
Fbx/point	Coordinates
DIEDAD (IAF, MAHF) - RDL 240/15.0 DME AUA	26°21'27.6"N 037°53'33.9"E
OBROR (IF) - RDL 117/15.0 DME AUA	26°20'51.4"N 036°22'57.6"E
ALSEN (FAF) - 5.1 DME AUA	26°25'45.5"N 038°18'24.8"E
AUA DVOR/DME (MAPT)	26°28'17.8"N 038°08'26.3"E
THR RWY 30	26°28'34.24"N 038°07'55.24"E

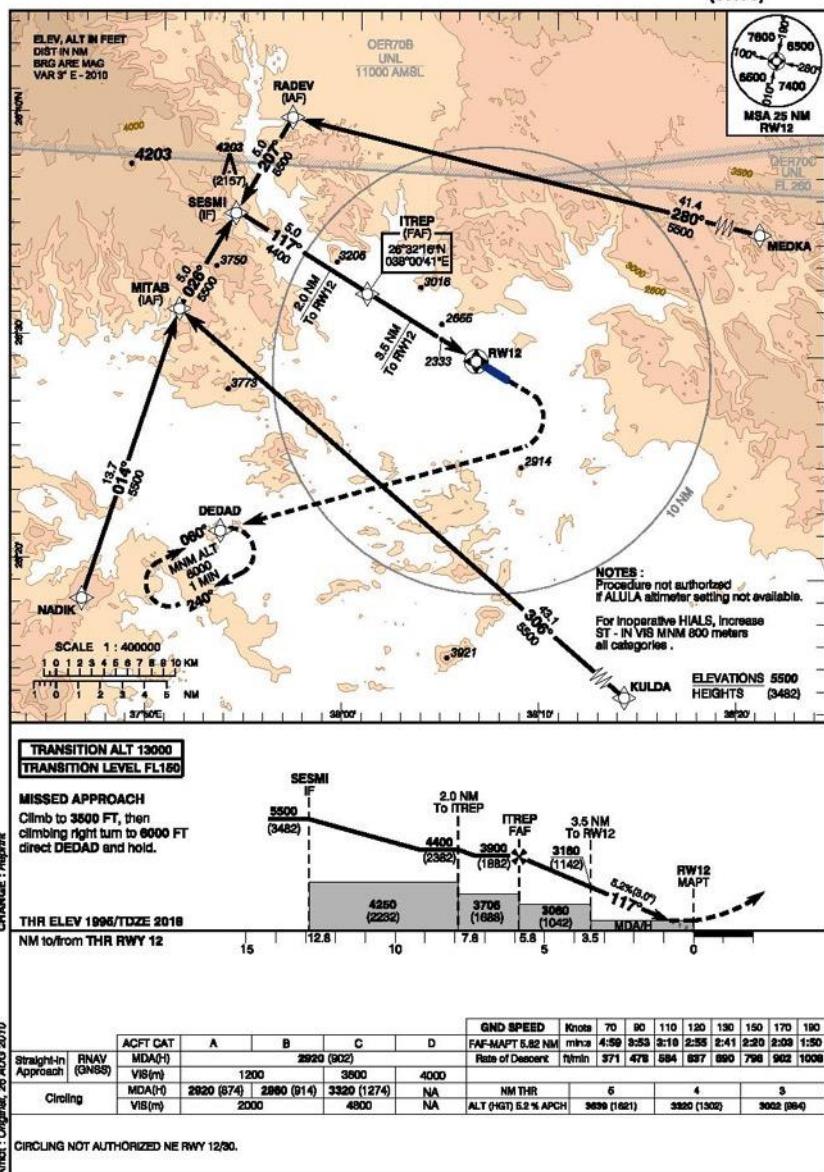
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INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 2046 ft  
HEIGHTS RELATED TO  
TDZ RWY 12 - ELEV 2018 ft

FRS : 133.5  
TBA : 122.8  
FIRE & RESCUE 121.0  
UNCONTROLLED AD

ALULA/Prince Abdulmajeed  
Bin Abdulaziz (OEAO)  
RNAV (GNSS) RWY 12



Amdu : Original, 26 AUG 2010

ALULA/Prince Abdulmajeed  
Bin Abdulaziz (OEAO)  
RNAV (GNSS) RWY 12

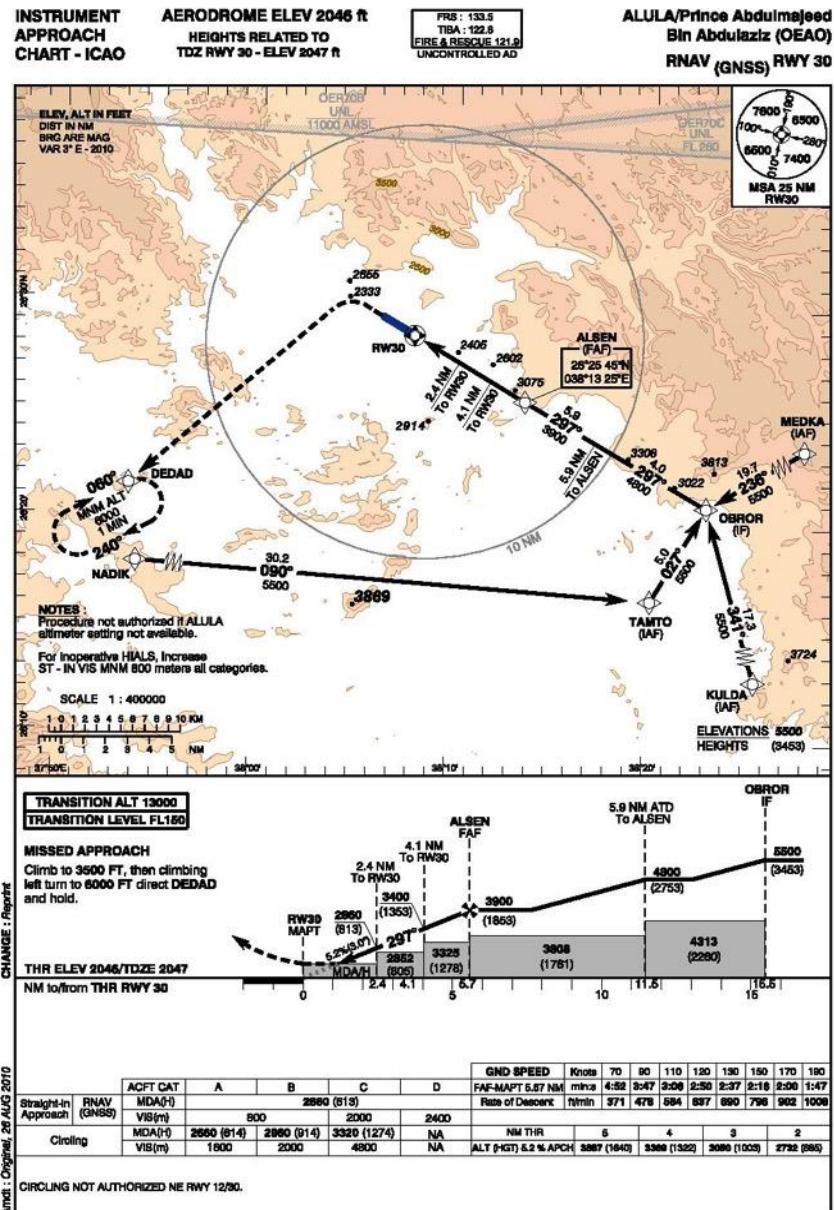
AERONAUTICAL DATA TABULATION

RNAV (GNSS) approach to RWY 12

Fbx/point	Coordinates
MITAB (IAF)	26°31'21.5"N 037°51'09.7"E
RADEV (IAF)	26°40'05.3"N 037°58'38.6"E
SESMI (IF)	26°35'43.4"N 037°53'53.7"E
ITREP (FAF)	26°32'15.8"N 038°00'41.3"E
DEDAD (MAHF)	26°21'27.6"N 037°53'33.9"E
MEDKA	26°31'10.5"N 038°41'43.8"E
MADIK	26°18'15.2"N 037°46'37.1"E
KULDA	26°04'10.5"N 038°28'23.0"E
THR RWY12 - RWY12 (MAPT)	26°29'23.21"N 038°08'19.46"E

CHANGE : Reprint

Amdu : Original, 26 AUG 2010

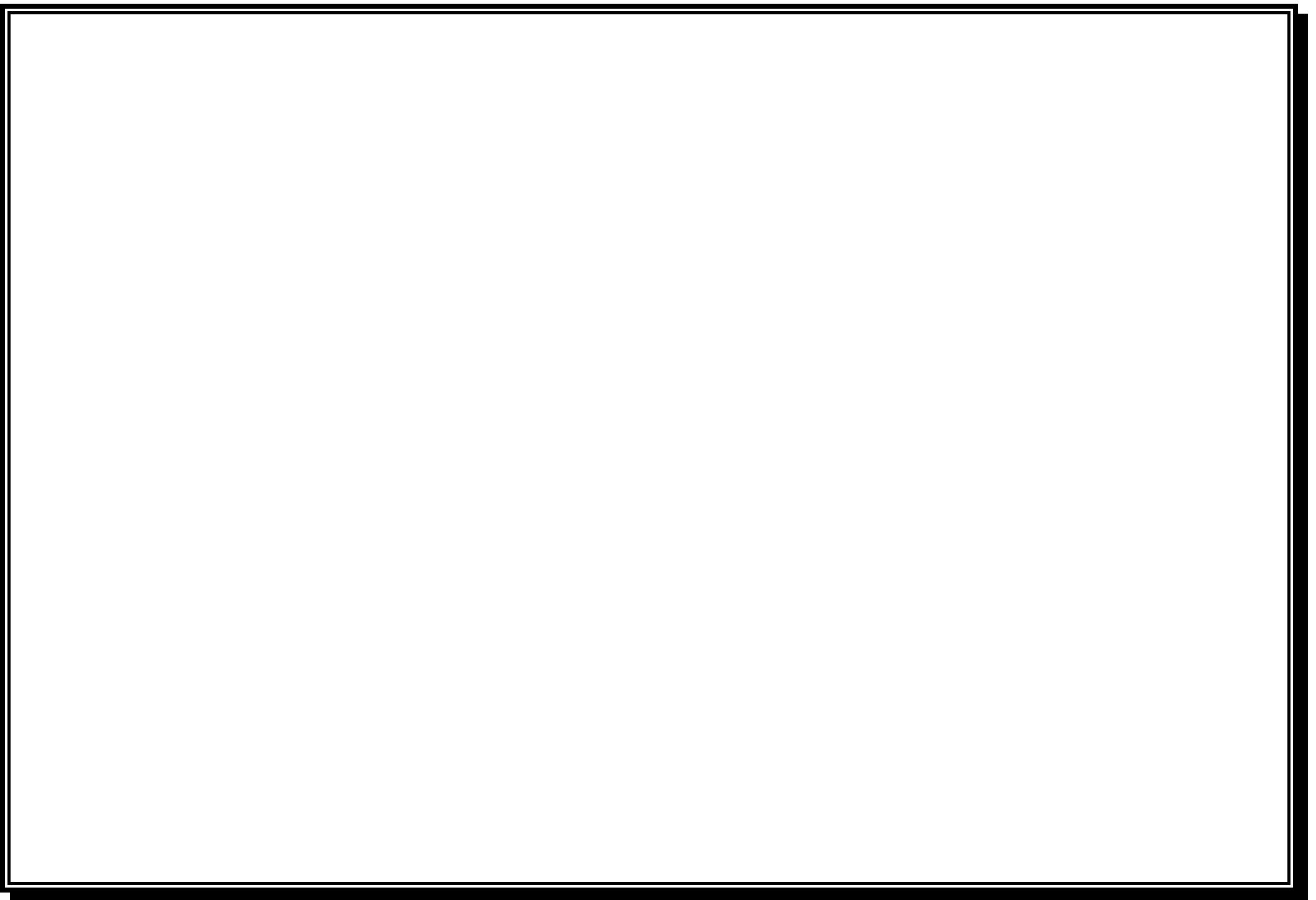


**ALULA/Prince Abdulmajeed Bin Abdulaziz (OEAO)**  
**RNAV (GNSS) RWY 30**

**AERONAUTICAL DATA TABULATION**

RNAV (GNSS) approach to RWY 30	
Flx/point	Coordinates
TAMTO (IAF)	26°18'30.1"N 038°20'12.2"E
MEDKA (IAF)	26°31'10.5"N 038°41'43.6"E
KULDA (IAF)	26°04'10.5"N 038°28'23.0"E
OBROR (IF)	26°20'51.4"N 038°22'57.7"E
ALSEN (FAF)	26°25'45.5"N 038°13'24.8"E
DEDAD (MAHF)	26°21'27.8"N 037°53'33.9"E
NADIK	26°18'15.2"N 037°46'37.1"E
THR RWY 30 - RW30 (MAPt)	26°28'34.2"N 038°07'55.24"E

**CHANGE : Original 26 AUG 2010**



## **Appendix E12: AIB notification Form.**

## **Appendix F: supporting documents**

- SOP\_OEAO\_ADM 01\_001 V1 AERODROME MANUAL UPDATE AND CONTROL
- SOP\_OEAO\_ADM 01\_002 V1 AERONAUTICAL INFORMATION SYSTEM PROMULGATION
- SOP\_OEAO\_ADM 01\_003 V1 MAINTAINING A LOGBOOK
- SOP\_OEAO\_ADM 01\_004 V1 FOD CONTROL
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