Airside Operating Procedure 02
(Airside Safety)

Hamid Karzai International Airport

Airside Safety Office

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PROMULGATION LETTER

The Airside Operating Procedure 02 – *Airside Safety* produced by Hamid Karzai International Airport (HKIA) Airside Safety Office (ASO) as part of the Aerodrome Safety Management System (ASMS) have been reviewed, accepted and promulgated under the authority of the President of the Hamid Karzai Int’l Airport.

This document was drafted by HKIA Safety Officers and reviewed by the Airside Safety Manager.

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Record of Amendments

As any publication which affects safety, this handbook is subject to change from time to time. The Airside Safety Office will distribute the amendments either in hard or soft copy. As the information is updated, the version number of the document will be amended and all concerned parties will be notified accordingly.

Please record all amendments introduced in this document by updating this page, it will help you to keep track of all amendments.

<table>
<thead>
<tr>
<th>Amendment #</th>
<th>Effective Date</th>
<th>Pages Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 02</td>
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</tr>
</tbody>
</table>
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitions</td>
<td>vii</td>
</tr>
<tr>
<td>Abbreviations</td>
<td>ix</td>
</tr>
<tr>
<td>Introduction</td>
<td>x</td>
</tr>
<tr>
<td>Section 1</td>
<td>11</td>
</tr>
<tr>
<td>1.1. Applicability</td>
<td>11</td>
</tr>
<tr>
<td>1.2. Responsibilities</td>
<td>11</td>
</tr>
<tr>
<td>1.2.1. Airport Operational Director</td>
<td>11</td>
</tr>
<tr>
<td>1.2.2. Airside Safety Office (ASO)</td>
<td>11</td>
</tr>
<tr>
<td>1.2.3. Organizations</td>
<td>11</td>
</tr>
<tr>
<td>1.3. Hamid Karzai Airport Overview</td>
<td>12</td>
</tr>
<tr>
<td>1.3.1. Runway</td>
<td>13</td>
</tr>
<tr>
<td>1.3.2. Taxiway</td>
<td>13</td>
</tr>
<tr>
<td>1.3.3. Apron</td>
<td>13</td>
</tr>
<tr>
<td>1.3.4. Ground Equipment Service Road (GSE- Road)</td>
<td>14</td>
</tr>
<tr>
<td>1.3.5. Aircraft stands</td>
<td>14</td>
</tr>
<tr>
<td>Section 2</td>
<td>15</td>
</tr>
<tr>
<td>2.1. Dangers</td>
<td>15</td>
</tr>
<tr>
<td>a. Dangers Around Aircraft Engines</td>
<td>15</td>
</tr>
<tr>
<td>b. Lighting on Aircraft</td>
<td>16</td>
</tr>
<tr>
<td>c. Aircraft Safety Area- Circle of Safety</td>
<td>17</td>
</tr>
<tr>
<td>2.1.1. Fueling Operations</td>
<td>18</td>
</tr>
<tr>
<td>2.1.2 Fueling safety zone</td>
<td>20</td>
</tr>
<tr>
<td>2.1.3 Spillage/Leakage</td>
<td>20</td>
</tr>
<tr>
<td>2.2. Adverse Weather</td>
<td>21</td>
</tr>
<tr>
<td>2.3. Noise</td>
<td>21</td>
</tr>
<tr>
<td>Section 3</td>
<td>22</td>
</tr>
<tr>
<td>3.1 Policies</td>
<td>22</td>
</tr>
<tr>
<td>3.1.1. General rules for pedestrians</td>
<td>22</td>
</tr>
<tr>
<td>Contact list</td>
<td>32</td>
</tr>
<tr>
<td>Section 4</td>
<td>33</td>
</tr>
<tr>
<td>Section 5</td>
<td>36</td>
</tr>
<tr>
<td>References</td>
<td>36</td>
</tr>
<tr>
<td>Attachments</td>
<td>37</td>
</tr>
<tr>
<td>ATTACHMENT</td>
<td>Page</td>
</tr>
<tr>
<td>--------------------</td>
<td>------</td>
</tr>
<tr>
<td>ATTACHMENT A</td>
<td>37</td>
</tr>
<tr>
<td>ATTACHMENT B</td>
<td>43</td>
</tr>
<tr>
<td>ATTACHMENT C</td>
<td>46</td>
</tr>
<tr>
<td>ATTACHMENT D</td>
<td>47</td>
</tr>
</tbody>
</table>
Definitions

**Aerodrome:** A defined area on land or water including any building, installations and equipment, intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

**Aircraft Operating Surface:** The areas of the airport within the airside intended for the movement of aircraft. Those areas include the aprons, taxiways and runway.

**Aircraft Stand or Parking Position:** Designated area on an apron used for the parking of an aircraft. The term *aircraft stand* is often replaced by the term *parking position* when applied in reference to Apron.

**Airside:** The movement area of an aerodrome, adjacent terrain and buildings or portions thereof, access to which is controlled.

**Apron Taxiway:** A portion of a taxiway system located on an apron and intended to provide a through taxi-route across the apron.

**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.

**Control Tower:** An Air Traffic Control Unit responsible to provide clearances and instructions to aircraft, vehicles and pedestrians operating on the CMA to ensure a safe and efficient air traffic operation.

**Controlled Movement Area (CMA):** Defined area on the airside where the access of vehicles and pedestrians is subject to an explicit approval from HKIA Control Tower (TWR).

**Foreign Object Debris (FOD):** is any misplaced or loose object that is not in fact expected at the Airside such as: metal, plastic, paper and rocks that, as a result, can injure personnel and damage property.

**Ground handling:** Generic term to describe the servicing of an aircraft while it is on the ground and (usually) parked at an aircraft stand.

**Ground Service Equipment (GSE):** Articles of a specified nature for use in the maintenance repair and servicing of an aircraft on the ground, including testing equipment and that equipment used on the ground to support aircraft operations.

**Ground Side:** is defined as the areas and buildings immediately adjacent to the airside and separated from the airside by a perimeter fence and controlled access gates.

**GSE Road:** An established surface route on the movement area meant for the exclusive use of vehicles/GSE.

**Jet Blast:** Air generated by a jet engine running and expelled by the exhaust affecting directly objects behind the engines. The distances at which the blast represents a danger to persons and objects depend on the thrust power setting applied to the engine(s).

**Maneuvering area:** That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.
**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).

**Non-Controlled Movement Area (NCMA)**: Defined area on the airside where the access of vehicles and pedestrians is not subject to an explicit approval from HKIA Air Traffic Control Tower (TWR).

**Operator**: Any person who is in actual physical control of an aircraft, vehicle or GSE.

**Organization**: Generic term which identifies all companies, airlines and other organizations providing a service related to airport operations.

**Runway Incursion**: An occurrence involving the unauthorized presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

**Runway**: A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

**Signalman (also known as Marshaller)**: The term signalman or marshaller refer to a trained staff responsible for providing guidance to either an aircraft or a vehicle by the mean of visual signals.

**Taxiway Incursion**: An occurrence involving the unauthorized presence of an aircraft, vehicle or person on the protected area of a surface designated for the taxiing of aircraft and the landing/take-off of helicopters.

**Vehicle**: A device in upon or by which a person or property may be transported, carried or otherwise moved from point to point, including a motor vehicle or a device moved by human power.
Abbreviations

ASO: Airside Safety Office
AOP: Airside Operating Procedure
AS: Airside Safety
ACAR: Afghanistan Civil Aviation Regulation
ACFT: Aircraft
HKIA: Hamid Karzai International Airport
ICAO: International Civil Aviation Organization
IATA: International Air Transportation Association
PPE: Personnel Protective Equipment
RWY: Runway
Sq: Square
TWY: Taxiway
TWR: Tower
VIP: Very Important Person
Introduction

This Airside Operating Procedure intends to provide airside managers and staff with a comprehensive set of guidelines to enhance safety and prevent incidents and accidents and reflects Hamid Karzai Int’l Airport Management policies to ensure a safe and efficient airside environment.

The procedures herein shall be complemented by organizations own policies and procedures based on the services each organization provides. Nonetheless, Hamid Karzai Int’l Airport Management urges organizations to adopt the aviation industry standards and best practices reflected in the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA).

Hamid Karzai Int’l Airport Management urges all organizations operating on the airside to adopt a preventive and proactive approach to ensure the safety of their staff in particular and the safety of airside operations in general.

Hamid Karzai Int’l Airport Management recognizes that education and training are the first and foremost important step to create a safe and efficient airside environment and promote a safety culture. It is of vital importance that organizations’ management commits in the education and training of their staff as well as in the management of safety within their organization.
Section 1

1.1. Applicability

The Airside Operating Procedure 02 – Airside Safety applies to:

a. HKIA employees including ACAA staffs assigned to HKIA;
b. Governmental law enforcement agencies;
c. Employees of companies based at HKIA;
d. Representatives of airlines flying to and from HKIA;
e. Personnel of contracted by companies doing construction work;
f. All personnel not included above whom demonstrates an operational need to work on the airside;

1.2. Responsibilities

1.2.1. Airport Operational Director

The Airport Operational Director is responsible to:

- Review and approve the Airside Safety and subsequent changes.
- Promote an airside safety culture.
- Disseminate the AOP to organizations operating on HKIA airside, and
- Ensure the adherence and compliance with the procedures herein.

1.2.2. Airside Safety Office (ASO)

The Airside Safety Office is responsible to:

a. Establish and regularly update the Airside Safety.
b. Liaise with all organizations operating on airside regarding safety issues.
c. Monitor the compliance with airside safety procedures.
d. Conduct hazard Identification and risk assessment.
e. Promulgate mandatory and voluntary reporting system.
f. Promote safety culture.

1.2.3. Organizations

Organizations operating on HKIA airside either on a regular or temporary basis are responsible to:

a. Comply with the airside safety procedure prescribed herein;
b. ensure so far as is reasonably practicable the health and safety of any individual who might be affected by any work activity within the control of the organization;
c. Produce Policies and Procedures documentation containing appropriate guidance and information related to the duties to be performed and the services to be provided;
d. Establish training programs to ensure employees are knowledgeable on the dangers they might encounter on the airside and act in a safe and conscious manner. Guidance on the contents of such Training program is given in Attachment B (extracted from IATA);
e. Provide staff with the training adequate to the specific tasks they are expected to accomplish;
f. Provide staff with appropriate personnel protective equipment;
g. Establish procedures aiming a safe and efficient airside operation based in the guidelines of this AOP and best aviation industry practices;

h. Report immediately any incident or accident to HKIA ASO and Tower;

i. Disseminate airside information and respective updates to airside staff;

j. Cooperate with ASO in the continuous improvement of airside safety and this Airside Operating Procedure.

k. Provide ASO with the organization’s respective Policies and Procedures Manuals and any other relevant documentation related with airside and ground handling operations.

1.2.4. Staff

All staff conducting their functions on the airside or using the airside as a way to reach their working place are responsible to:

a. Take reasonable care for the health and safety of himself/herself and other persons who might be affected by their acts or omissions.

b. Report any occurrences in which they have taken part or they have witnessed.

c. Conduct only tasks for which they have been trained and are competent.

1.3. Hamid Karzai Airport Overview

The Airside is that part of the airport which includes Aprons, GSE roads, Taxiways, Runway, adjacent buildings or portion thereof to which the access is controlled. See Figure 1.1.

![Figure 1.1. Airside shaded in green color](image-url)
1.3.1. Runway

Defined rectangular area used for the takeoff and landing of aircraft.

Figure 1.2. Runway 29/11

1.3.2. Taxiway

Defined asphalted path on the aerodrome for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another.

Figure 1.3. Taxiways

1.3.3. Apron

Defined area on the aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fueling, parking or maintenance.
1.3.4. Ground Equipment Service Road (GSE-Road)
An established surface route on the movement area meant for the exclusive use of vehicles/GSE.

1.3.5. Aircraft stands
(i) Designated area on an apron used for the parking of an aircraft. The term “aircraft stand” is often referred as “aircraft spot”. Refer to attachment A for detailed plans.
Section 2

2.1. Dangers

While operating on airside it is necessary to be completely aware of the situation around us. Loss of situational awareness may result in serious injuries or death. As most of the airside activities take place on aprons, this part of the airside is more conducive to incidents due to the amount of personnel and equipment operating simultaneously. Nevertheless, it shall be taken into consideration that activities on the controlled movement area might lead to even more catastrophic outcomes and therefore situational awareness shall be maintained at its maximum.

To raise airside staff’s awareness, the dangers present permanently on the airside are listed as follows:

Always remember

- Never approach an aircraft until the aircraft engines are shut down, the Anti-Collision Beacons are turned off and the chocks are placed.
- Keep away from the rear of the aircraft and from the engines at all times.

a. Dangers Around Aircraft Engines

- Jet engines operate by consumption of large amounts of air into the intake at the front of the engine. This air is compressed and then expelled through the rear of the engine travelling at very high speeds and at very high temperatures thus propelling the aircraft.
- Both engine ingestion and jet blast can be fatal to people and can cause a great deal of damage to other aircraft, vehicles and equipment. A jet engine is very powerful even when taxiing or just starting up or shutting down.

![Figure 2.1](image)

- Propellers are particularly dangerous because they spin at high velocity that it is difficult to see. It may also be difficult to hear a propeller engine operating due to the high ambient noise levels at an aerodrome. Accidentally walking into an operating propeller has seriously injured many people.
- The exhaust gases of some propeller driven aircraft may be hot and may travel with the same force as jet engine exhaust so similar precautions should be taken as would be taken for a jet aircraft to avoid jet blast around prop aircraft.
- Always walk around the wing of a propeller driven aircraft and even if the aircraft appears to be shut down never walk within the arc of a propeller.

- Helicopter Operations can be particularly dangerous as the propeller or rotor, even when at idle power, has sufficient force to cause fatal or serious injuries. The following procedures should apply to all helicopter operations:
  - Never approach the rear of a helicopter persons in this location are at risk of injury or death from engine exhaust gases and/or contact with the tail rotor.
  - Approach a helicopter from the front or side and ensure you are in the pilot’s line of vision.
  - Secure loose articles such as hats and do not give chase if they are blown away.
  - Eyes should be protected from any dust or blowing objects.
  - If eyes become blinded by foreign debris, crouch or sit down and wait for assistance. Do not continue to approach the helicopter.
  - Never drive or park any vehicle or large equipment under the main or tail rotor blades.

![Picture 2.2. Jet Blast]

b. Lighting on Aircraft
   
   (i) Ground handling personal shall be able to recognize aircraft lights and their meaning.

   Navigation lights are composed by:
   - One red light on the left wing.
- One green light on the right wing.
- One white light at the rear.

(ii) The rotating beacon is a red or white beacon located under and/or on the top of the fuselage (Picture 2.4) on the top of the vertical stabilizer in certain types of aircraft. When this beacon is illuminated, it indicates that the aircraft engines are running or in the process to start the engines.

(iii) Taxi lights are usually turned ON when an aircraft is taxiing or about to start taxiing.

(iv) Only crew members and personnel handling Ground Power Unit are allowed within the aircraft safety area when the aircraft engines are running.

![Aircraft Lights Image]

**Picture 2.4. Aircraft Lights**

c. Aircraft Safety Area- Circle of Safety

Around each aircraft on a stand, a Safety Area is established to prevent inadvertent manoeuvres which might damage the aircraft as well as to prevent ground personnel to suffer injury.

The term “Circle of Safety” relates to an imaginary/invisible circle which typically extends for 5 meters around the aircraft. Inside this circle an inner zone encapsulates the fuselage and engine areas with a 2 meters’ safety zone (Picture 2.5).

Only vehicles necessary for the servicing of an aircraft shall enter the Circle of Safety. The “Circle of Safety” also describes a safe process for approaching an aircraft with the intent of servicing it. The following process should be adhered to at all times.

Before approaching the aircraft, make sure that:
- The aircraft has stopped.
- The wheels are chocked.
- The anti-collision beacon is off.
- The marshaller or the crew has given the “safe to approach” signal.
Vehicle operators and ground personnel shall comply with the following procedures:

(i) Vehicles/equipment directly servicing the aircraft should come to an initial stop at distance no less than five (5) meters from the aircraft (outer Circle of Safety). All equipment must be driven at walking pace 4 – 6 Km/h.

(ii) Vehicles/equipment should then come to a second stop at distance no less than two (2) meters from the aircraft (inner Circle of Safety). All equipment must be driven at slow walking pace 2 – 4 Km/h.

(iii) Vehicles reversing towards an aircraft shall be assisted by a marshaller.

2.1.1. Fueling Operations
At Hamid Karzai Airport, the method of supplying fuel to aircraft is the direct pumping from fuel tankers into the aircraft tanks.

Only personnel who have been suitably trained and assessed as competent may carry out aircraft fueling.

Commencement of fueling is defined as ‘connection of the bonding clip.’ Completion is defined as ‘when the bonding clip has been removed’.

At HKIA, fueling operations are strictly prohibited:

- With passengers on board, embarking or disembarking. An exception for fueling with passengers on board may be granted to “Deportees’ Flights” and shall be coordinated in advance with ASO. The presence of Fire Department and ASO staff is mandatory if such operation is approved.
- On an aircraft with engine(s) running.
- When a Weather Warning for Lightning has been broadcasted. Refer to AOP 04 – *Adverse Weather* for detailed information.
- During the load/off-load of Dangerous Goods.
- Inside Hangars.

The following measures shall be applied to ensure safe aircraft fueling operations:

(i) Refueling vehicles are not to approach aircraft until the aircraft engines have stopped and anti-collision lights have been switched off.

(ii) All personnel engaged in refueling procedures are to ensure that serviceable fire extinguishers are available.

(iii) All personnel engaged in refueling procedures are to be aware of the method of call for the Airport Fire Service.

(iv) Vehicles and equipment must not be parked under any part of the aircraft during refueling, with the exception of refueling equipment.

(v) An unobstructed path for the immediate evacuation of the fuel truck shall be kept at all times.

(vi) Safety cones shall be placed to identify the fueling safety zone.

(vii) Only the operators directly involved in the fueling operation are permitted within the fueling zone and the number of these should be kept to a minimum.

(viii) All personnel must avoid any activity involving the risk of fuel vapour ignition. These include smoking, use of naked lights, operation of electrical systems and activity creating sparks from exposed iron or steel studs on footwear or from tools or other equipment or vehicles.

(ix) Hose ruptures during refuelling from a tanker are rare. Nevertheless, personnel shall take great care to ensure that ground equipment does not hit the tanker or its hoses.

(x) Vehicles shall not be driven over a fuel hose.

(xi) Vehicle engines must not be left running in the fuelling zone. This includes Ground Power Units (GPU’s). Hot vehicle exhausts are a major hazard and are prohibited inside the fuelling zone.

(xii) Refuelling equipment shall be bonded to the aircraft to prevent a discharge of static electricity. If the bonding wire is disconnected during fuelling, the fuelling operation shall be stopped until the bonding wire is reconnected.

(xiii) Non-intrinsically safe equipment, including portable electronic devices (PEDs), such as mobile telephones, pagers, radios and any other electronic or electrically operated equipment are prohibited.

(xiv) Aircraft Auxiliary Power Units (APU’s), which have an exhaust efflux discharging into the fuelling zone, should, if required to be in operation during fuelling, be started before filler
caps are removed or fuelling connections made. APU’s must not be switched on during any refuelling operation.

(xv) If the Fuelling Overseer considers that a hazard exists, refuelling should be stopped immediately until conditions permit resumption.

(xvi) Fuelling operations shall be avoided during the load and off-load of cargo or when servicing around the aircraft has the potential to create ignition sources.

2.1.2 Fueling safety zone

During fuelling operations, air and fuel vapour are displaced from the aircraft tanks through vent points, which are usually situated at the aircraft wingtips. This presents a hazard of fuel vapour being ignited. For this reason, additional rules are required within an area known as the fuelling zone.

A fuelling zone is established when aircraft fuelling operations are in progress, extending at least 5 metres radially from the aircraft filling and venting points and from any part of the fuelling vehicle and equipment including hoses.

![Fueling Safety Zone](image)

2.1.3 Spillage/Leakage

Spillage could occur during fueling operations. Fuel providers are responsible for the first response to own spillage by using proper absorbent material if the spillage does not exceed one square meter (1sq.) and the spill has stopped.

In cases of uncontrolled leakage and the contaminated area exceeds 1sq the fuel provider supervisor shall notify immediately ATC Tower, Fire Department and ASO for further action.

The following actions shall be taken immediately in the event of an uncontrolled spillage and prior the arrival of Fire Department:

(i) Cut off the source of the spillage if possible.
(ii) Restrict all activities in the area.
(iii) Evacuate all persons immediately to distance of at least 50 meters.
(iv) Switch off all equipment and do not allow equipment to be started.
(v) Prevent any source of ignition and spark.

2.2. Adverse Weather

Organizations shall establish procedures and a notification system which enables their personnel operating airside to be aware of the adverse weather conditions and take appropriate actions.

The procedures applicable during or in preparation for adverse meteorological phenomena are described in the Airside Operating Procedure 04 - Adverse Weather.

2.3. Noise

It is recognized that working in vicinity of aircraft or high sounded area can expose to a level of noise exposure which could damage person’s hearing and health.

Therefore, it is required that all personnel working in proximity of aircraft on aprons or in the vicinity of runway, taxiway or maintenance area shall use hearing protection as part of their Personal Protective Equipment (PPE).

Organizations are responsible to provide appropriate hearing protection equipment, monitor and enforce its use whilst operating on vicinity of aircraft or high sounded area.
Section 3.

3.1. Policies

3.1.1. General rules for pedestrians

For the purpose of the Procedure, the term Pedestrians refers exclusively to individuals holding a HKIA Privilege Card and involved on airside operations.

Passengers are not included in the definition of Pedestrians.

(i) The presence of pedestrians on aprons shall only occur when the pedestrian is:
   - Actively involved in servicing an aircraft,
   - Directly involved in maintenance/construction services, or
   - Performing security/safety functions.

(ii) Presence of pedestrians on the CMA is limited to performing maintenance, construction service, security and safety and is object of a prior coordination with ASO. The use of vehicle to transport the personnel during works on the CMA is mandatory.

(iii) During construction works on the CMA, the presence of pedestrians is authorized within the confines of the allocated working area based on the agreements established between the contractor and ASO.

(iv) Specific temporary works requiring personnel on foot such as topographic surveys or pavement evaluations shall be previously coordinated with ASO. Personnel will be escorted by a certified driver.

(v) Pedestrians shall wear a reflective belt or vest at all times while on the airside.

(vi) Pedestrians shall secure all carried items to prevent objects of being blown away.

(vii) Airside personnel shall wear clothing and footwear appropriate to the functions which protect them from injury and from environmental conditions. Footwear shall be adequate to prevent falls in slippery or icy floor and shall not have metallic parts which might produce sparks when in contact with the floor.

(i) Hat & Handkerchief are allowed on the airside provided they are properly tight and secured.
(ii) Staff entering the airside via the Olive Gate shall be transported by vehicle to their working location if the workplace is not located on the building adjacent to Apron 4 and 5.

(iii) All movements of staff between Apron 7 and Aprons 3 and 4 shall be accomplished using a vehicle.

3.1.2. Rules for vehicles

**Remember:** aircraft and pedestrian always have the right of way over vehicle and equipment. Vehicles and equipment shall NEVER move across the path of the taxiing aircraft or embarking or disembarking crew.

Due to the intensive movement of vehicles on the airside, vehicle operators shall adhere to the driving procedures specified in the Airside Operating Procedure 03 – Vehicle Control.

Only vehicle operators holding a valid Driver Pass are authorized to operate a vehicle on the airside.

Any vehicle or equipment reversing toward aircraft, buildings or other equipment shall be guided by a marshaller (co-worker).

3.1.3. General Rules for Aircraft Handling

Ramp safety rules and procedures promote safe ground handling. The minimum safety rules and procedures defined in this section should always be applied and understood by personnel working on the ramp.

Organizations providing ground handling services shall apply ICAO and IATA standards in the performance of their functions.

**Aircraft damage can endanger passengers, staff and aircraft.** Even a slight scratch on an aircraft may result in a serious accident.

If you detect or cause any damage on aircraft, you MUST report it immediately to the crew, your supervisor or ASO.

The following standards of safety are expected to be applied by all organizations conducting operations on Hamid Karzai Int’l Airport airside:

- Proper training of personnel in correct operating procedures and safe work practices.
- Enforcement of safety rules, procedures and requirements by continuous supervision.
- Exercising extreme care when operating ground support equipment in the vicinity of aircraft.
- Only adequately trained and authorized personnel are permitted to operate equipment.
- Equipment is maintained and checked on a regularly scheduled basis.
- Portable electronic equipment shall not be operated whilst operating GSE.
- Equipment should never cross the path of taxiing aircraft or embarking / disembarking passengers.
- Equipment should be driven no faster than walking speed when in the vicinity of aircraft.
• Safety shoes or boots should be worn to prevent foot injuries.
• Personnel working in noise-intensity areas should wear approved hearing protection.
• Clothing/Reflective jackets appropriate to the weather conditions should be made available to personnel.
• Personnel shall not walk or stand on a moving conveyor belt.
• Personnel shall keep clear of aircraft engine intake/exhaust areas
• Ground support equipment should be moved away from the aircraft vicinity and secured.
• Vehicles MUST NOT park under the aircraft wing-tip fuel vents.
• The ground area beneath exit doors should be kept clear of any obstructions.

a. Ground Service Equipment

Ground service equipment shall be object of a scheduled maintenance program to prevent malfunctions and fluids leakage. Daily safety checks before operating any ground service vehicle shall ensure that:

(i) All lights are operational.
(ii) Steering and brakes, including emergency brakes, are in good working condition.
(iii) Tires are inflated properly and have adequate tread.
(iv) Windshield, if installed, is attached properly, free of cracks and scratches, and clean.
(v) Fuel, oil and water levels are sufficient.
(vi) If external damage exists, it will not affect vehicle performance or cause injury to personnel or damage to other equipment, facilities or aircraft.
(vii) There are no leaks or spills.
(viii) Hydraulically operated equipment is operative.
(ix) Aircraft protective buffers (bumpers) are in good condition.

b. Marshalling

The guidance of aircraft onto an aircraft stand is accomplished by a Signalman.

The **Signalman** or **Marshaller** shall be qualified to guide the aircraft to the final stop on the aircraft stand and shall use the hand signals in accordance with ICAO standards signals.

When deemed necessary to ensure safe wingtip clearance, Wingman or wing-walker shall be positioned at the wingtip(s) and shall be in visual contact with the Marshaller at all times.

During hours of daylight circular bats or wands shall be used.

During the hours of darkness and in reduced visibility, marshalling signals shall be provided using illuminated bats or wands.

Prior marshalling an aircraft, the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects.
c. Pushback operation
Due to the proximity of GSE road to the aircraft stands on Apron 4, pushback tractors shall only be connected to the aircraft on stands 20 to 24 after:

- All aircraft cargo doors are closed.
- Cabin door is closed and stairs are being removed from aircraft.
- The cockpit crew has received the clearance for pushback and engine start. For aircraft so equipped, direct interphone communication between cockpit crew and signalman is mandatory during pushback operations.

d. Walking passengers’ supervision
Being a common practice to transfer walking passengers between the domestic terminal and aircraft on stands 20 to 23 and from the international terminal to aircraft on stand 2 when embarking and disembarking, the following procedures shall be applied:

- Passengers shall be supervised at all time when on the airside. Adequate number of staff shall be allocated based on the path passengers will follow.
- Passengers shall be kept in a well identified path between the aircraft and the terminal.
- Paths shall be such as to avoid passengers passing below aircraft wings or beneath fuel vents, or close to propellers or rotors of the aircraft they are boarding/disembarking or those of aircraft on adjacent stands.
- Paths should also be clear of vehicular traffic around the aircraft, electrical cables, fuel hoses and other ramp equipment.
- Passengers shall be advised to secure any objects which might potentially be blown by the wind prior exiting the terminal and/or the aircraft to prevent the risks of FOD.
- Traffic on the GSE road shall be controlled to ensure the safety of passengers while crossing.
• Boarding passengers shall be allowed in small groups onto the airside as to prevent the gathering at the bottom of the stairs and consequent possible occupation of the GSE road as illustrated in picture 3.3.

• Passenger boarding or disembarkation should be halted during the arrival (taxi on) or departure (pushback) of aircraft on the adjacent (port side) stand. Boarding/disembarking may recommence once the adjacent aircraft has either shut down engines or pushed back on to the apron taxiway.

![Picture 3.3. Passenger on GSE road](image)

e. **Cones:**

The positioning of safety cones to create a protective zone around aircraft is mandatory. Safety cones shall be placed as a minimum at the nose, rear, wing tip and in front of the engines as illustrated in the examples below.

Safety cones shall be placed at a maximum distance of 1 meter from the aircraft.

The cones shall be placed immediately after the aircraft has shut down the engines and removed immediately prior the commencement of push back.

The following figures illustrate the requirement for the placement of cones based on aircraft types:

![Figure 3.4.1 Jet Aircraft](image)  ![Figure 3.4.2 Turboprop Aircraft](image)
f. **Chocking:**

Aircraft chocks are mandatory for all aircraft after the final stop on an aircraft stand. Each operator shall establish procedures in accordance with aviation industry standards and best practices and manufacturers’ instructions for each type of aircraft.

As safety standards for HKIA airside, the following shall be applied:

- Chocks shall be placed when the Anti-Collision light shut off and clearance to approach the aircraft is given by the authorized person.

- As a minimum, chocks shall be positioned on the nose gear wheel and on the wheels of at least one main landing gear as shown in picture 3.4.3.

- In the event of high wind condition additional chocking/other measures shall be taken to secure the aircraft. Refer to Airside Operating Procedure – *Adverse Weather* for specific procedures.

- Chocks shall not be removed from the aircraft until clearance is given by authorized person.

- After removal, the chocks shall be put beside Flood Lights.
g. **Passenger Loading Bridges:**

The International Terminal is equipped with two passenger loading bridges serving aircraft on stands 2 and 4 (picture 3.7).

The loading bridges shall be operated by qualified staff.
Prior operating the passenger loading bridge, the loading bridge operator shall conduct a visual inspection of the area where the loading bridge will maneuver to ensure the area is free of obstructions.

No equipment shall be parked or stored in where the loading bridge is expected to maneuver. This area, even not marked on the apron, has been established as being 15 meters in front of the loading bridge resting position and 25 meters to the left side of the loading bridge resting position (Picture 3.8).

3.1.4. Use of trucks to load/off-load aircraft

When the load/off-load of an aircraft is accomplished using trucks, the following rules shall be respected:

- Trucks shall be cleaned and free of FOD prior entering the apron.
- Trucks shall be positioned next to the aircraft being serviced in such manner they do not obstruct or interfere with the adjacent aircraft stand.
3.1.5. Smoking policy

Smoking is strictly prohibited on the airside. This policy aims to remove any ambiguity concerning where people may smoke or use naked lights on airside. Furthermore, at HKIA airside there is no designated area for smoking.

3.1.6. Use of Personnel Protective Equipment

All organization shall ensure that their employees are provided with adequate PPE. In addition, the PPE shall be maintained in a relevant manner to remain effective and its use shall be monitored and enforced by the organization.

Beyond that ASO team will randomly check the PPE for the reason of safety.

a. High Visibility Vest

All personnel shall wear High Visibility Vest when operating on the airside. High Visibility Vests shall be of a conspicuous color (generally yellow or orange).

- Aircrew and cabin staff proceeding to or from their aircraft or conducting pre/post flight walk around are not exempt from these requirements.
- In order to maintain the required level of brightness, the Vest should be kept clean.
- Jackets and coats should be fastened at the front to remain fully effective.

Picture 3.9. Truck of Load/ Off

Picture 3.10. High Visibility Vest
b. Hearing Protection

Continuous exposure to noise produced by aircraft engines and other equipment will seriously damage hearing. Organizations shall provide the appropriate PPE to airside personnel and ensure its adequate use.

3.1.7. Use of Mobile Phone & Radio

(i) The use of mobile phones is prohibited while driving on the airside.

(ii) The use of hand held radios is permitted while driving on the CMA; however, drivers shall reduce its use to the minimum necessary while driving. To the most extent possible, transmissions shall be accomplished when the vehicle is stopped.

(iii) The use of hand held radios is prohibited while driving on the aprons. The vehicle shall be stopped when the driver operates the hand held radio.

(iv) The use of mobile phones and radios is strictly prohibited near fueling operations and explosive material including aircraft equipped with flares/chaffs. A safe distance of at least 20 meters shall be kept.

(v) The use of regular Motorola radios in or near aircraft is forbidden. Regular radios are not intrinsically safe and due care and diligence shall be used in and around the aircraft and explosive material.

3.1.8. Use of Seat Belt

The use of vehicle seatbelt on the airside is optional; however, the use of seat belt is recommended:

- For vehicles with an open cabin.
- When driving on adverse weather conditions.

Organization should establish internal regulations for the use of seat belts.

3.1.9. Preventing Foreign Object Debris/Damage

Foreign object debris (FOD) can damage aircraft and cause injury to personnel. The following procedures shall be enforced by all airside personnel:

(i) FOD observed on controlled movement area shall immediately be reported to HKIA Tower and ASO.
(ii) Keeping the airside clear of FOD, such as is the responsibility of all airside personnel including aircraft crews.

(iii) Spills and leaks shall be immediately reported to ATC Tower and ASO.

(iv) Guidelines for preventing foreign object damage include:

- Inspect the parking area after load/off-load has been conducted.
- Pick up FOD as soon as you see it.
- Dispose FOD in appropriate receptacles.
- Account for all tools in and around aircraft.
- Continuously inspect ramp areas for FOD.
- Perform FOD vehicle checks prior entering aircraft operating areas.

Organization and involved agencies in HKIA are responsible to have close cooperation with airport servicing company to eliminate FOD on the airside.

3.1.10. Fire Prevention & Response

Airside personnel shall be familiar with the operation of fire extinguishers. As fire extinguishers are not widely available, organizations are responsible for the provision of initial firefighting by using own portable extinguishers.

Supervisors and apron personnel should ensure that:

- The location of the nearest fire extinguisher is identified when servicing an aircraft.
- Fire extinguishers are kept visible and their access is kept unobstructed.
- Unserviceable fire extinguisher is reported immediately to ASO or Fire Department.
- Flammable materials are properly stored and disposed.

Contact list

<table>
<thead>
<tr>
<th>Agency</th>
<th>Office</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKIA Safety Manager</td>
<td></td>
<td>0799195804</td>
</tr>
<tr>
<td>Fire Department</td>
<td>---------</td>
<td>0783672693</td>
</tr>
<tr>
<td>Airside Safety Office (ASO)</td>
<td>0202311803</td>
<td>0784101263</td>
</tr>
<tr>
<td>HKIA Tower</td>
<td>020232658</td>
<td>0787969036</td>
</tr>
<tr>
<td>Harrirod</td>
<td>---------</td>
<td>0797797173</td>
</tr>
</tbody>
</table>
### Section 4.

#### 4.1. Reporting of Safety Information

The reporting of safety information is the responsibility of all personnel and shall be seen as a contribution for aviation safety.

While some conditions can be reported at a later time, others shall be immediately reported as they can endanger person’s safety and destroy property. The intent of immediate reporting is to initiate an adequate response from the relevant agency in order to safeguard human life and protect property from damage or destruction.

The following events or observed conditions require mandatory and immediate reporting to allow an immediate response:

<table>
<thead>
<tr>
<th>Report to</th>
<th>Event or observed condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKIA Tower</td>
<td>FOD on taxiway or runway</td>
</tr>
<tr>
<td></td>
<td>Wildlife strike</td>
</tr>
<tr>
<td></td>
<td>Wildlife sighting (feral animals)</td>
</tr>
<tr>
<td></td>
<td>Taxiway and runway incursions</td>
</tr>
<tr>
<td></td>
<td>Uncontrolled spill/leakage</td>
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<tr>
<td></td>
<td>Fire or smoke on an aircraft (either parked or moving)</td>
</tr>
<tr>
<td></td>
<td>Disabled vehicle on CMA</td>
</tr>
<tr>
<td></td>
<td>Mortar/Rocket impact</td>
</tr>
<tr>
<td></td>
<td>Unexploded Ordnance</td>
</tr>
<tr>
<td>Fire Department</td>
<td>Fire or smoke on and around the Airside</td>
</tr>
<tr>
<td></td>
<td>Injuries to personnel requiring immediate treatment</td>
</tr>
<tr>
<td></td>
<td>Spills and leaks on pavement</td>
</tr>
<tr>
<td>Aircrew and ASO</td>
<td>Scratch or dent identified on the aircraft airframe</td>
</tr>
<tr>
<td></td>
<td>Equipment collision with the aircraft</td>
</tr>
<tr>
<td>Supervisor &amp; ASO</td>
<td>Collision with a vehicle or aircraft</td>
</tr>
<tr>
<td></td>
<td>Destruction or damage of equipment</td>
</tr>
<tr>
<td></td>
<td>Spills on pavement</td>
</tr>
<tr>
<td></td>
<td>Unsafe acts</td>
</tr>
</tbody>
</table>
The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability.

Reporting occurrences contributes to the improvement of safety by ensuring that relevant information is reported, collected, stored, protected and disseminated.

a. Voluntary Reporting

There is growing realization in aviation that encouraging prompt reporting of safety issues actually reduces the number of accidents and incidents.

An environment of “open and honest reporting” is a key element in fostering a “just culture” for the systematic reporting, collection, analysis and dissemination of safety information that will be used solely to prevent accidents.

Encouraging all airside personnel to promptly and fully report incidents and accidents is a key element in a just culture.

Personnel working on the airside shall be encouraged to report any hazard or unsafe acts which in their opinion affects or have the potential to affect the safety of persons or damage of property. Such reporting can contribute for the continuous improvement of a safe airside environment. Information therein will be used for the sole purpose of accident prevention.

The form in Attachment C shall be used to report detected safety hazards.

The form in Attachment D shall be used to report incidents and accidents.

4.2. Occurrence and Hazard Safety Analysis

An occurrence is an action or omission which has resulted in a decrease of safety. The intent of occurrences’ safety analysis is to determine the causes and contributing factors in order to correct discrepancies and therefore prevent reoccurrence.

A hazard is a condition which has the potential to create an incident or accident if no action is taken to fix it. The intent of hazards’ safety analysis is to conduct a safety risk management and recommend the appropriate actions to reduce or eliminate such hazards.

In both cases, the contribution of all personnel involved in airside operations is essential.

Airside personnel shall be able to:

- Understand the difference between an error and a violation.
- Understand the importance of cooperating in safety analysis.
- Recognize the violations and its effects.
- HKIA ASO is responsible to collect and analyze all information related to incidents and accidents occurring on the airside as well as reported hazards.
- The objective of safety analysis is to determine the causes and contributing factors of incidents and accidents and recommend changes when applicable to prevent similar occurrence.
- The safety analysis of hazards present on the airside is to reduce or eliminate such hazards. In cases where the hazard cannot be reduced or eliminated, the probability for creating an incident/accident and the severity of that incident/accident shall be evaluated to determine if the risk can be accepted as it is.
• In no circumstance the objective of a safety analysis is to determine guilt or blame to individuals and finding of the analysis shall not be used for disciplinary prosecution unless malicious intent or negligence has been found.

(i) Airside personnel involved in incidents or accidents and their respective supervisors shall provide all cooperation during the gathering of information and analysis. Failure to contribute may lead to incorrect assumptions and therefore inadequate recommendations.
Section 5

References
1. ICAO Annex 14
2. ACI Airside Safety Handbook
3. Afghanistan Civil Aviation Regulation Part 12
- General Overview of south side Aprons

Figure 1.1. (Civilian Aprons Illustration)
- Aircraft stands on Apron 4:

![Aircraft stands on Apron 4](image)

*Figure 1.2. Aircraft stands*
- Aircraft Stands on Apron 5:

![Aircraft Stands on Apron 5](image)

*Figure 1.3. Aircraft stands*
Figure 1.4. Aircraft Stands

Aircraft Stands on Apron 5 stand 5 - 8
- Aircraft Stands on Apron 1:

Figure 1.5. Aircraft stands
- Stands on Apron 3:

Note: Aircraft stands on apron 2 are not designated yet.
ATTACHMENT B

For the purpose of determining the applicability of airside safety training subject areas, ground handling personnel are grouped according to operational function as follows.

**Function 1:** Personnel whose duties require access to airside areas.

**Function 2:** Personnel whose duties require operation of basic GSE (e.g., tractors, belt loaders).

**Function 3:** Personnel whose duties require:

1. Operation of specialized equipment (e.g., aircraft movement units, container/pallet loaders, de-icing vehicles, catering vehicles),
2. Exercise of control during aircraft movement operations, or
3. Performance of lead responsibility over other personnel.

**Function 4:** Personnel in first level management, to include supervisors having responsibility for:

1. Directing staff and/or equipment resources, or
2. Controlling an operational activity.

**Function 5:** Personnel in station management having responsibility for resource issues, health and safety, incident management and budgetary control.

**Training Subject Areas**

Airside safety training shall address, according to assigned operational functions.

1. Safety Philosophy
   
   a. Company safety policy and program
   b. Employer/ employee responsibilities

2. Safety Regulations
   
   a. International aviation regulations
   b. State aviation regulations
   c. Airport airside regulation/procedure
   d. Safe working and operating practices

3. Hazard
   
   a. Vehicle movements
   b. Pedestrian movements
   c. Aircraft movements
   d. Jet engines
   e. Propeller- driven aircraft and helicopters
   f. Aircraft antennae and other protrusions
   g. GSE
   h. Aircraft fueling and fuel spills
   i. Adverse and seasonal weather conditions
j. Night operations
k. Working at height
l. Slips, trips and falls
m. Noise
n. Manual Handling

4. Human Factors
   a) Motivation and attitude
   b) Human behavior
   c) Communication skills
   d) Stress
   e) Ergonomics
   f) Effects of psychoactive substances (drugs and alcohol)
   g) Fatigue
   h) Time pressure
   i) Peer management pressure
   j) Situational awareness
   k) Teamwork

5. Airside Markings and Signage

6. Emergency Situations
   a) Reporting
   b) Injuries
   c) Security threats
   d) Spillage
   e) Alarms and emergency stops
   f) Fuel shut-offs
   g) Ground-to-flight deck emergency hand signals
   h) Fire
   i) Severe weather
   j) Aircraft stand emergency procedures

Note 3: Subject areas a) through j) are applicable to personnel as appropriate to specific function and types of operations conducted.

7. FOD prevention

8. Personal protection
   a) Personal protective equipment
   b) Occupational health and safety
   c) Musculoskeletal injury prevention
d) Weather exposure  
All Functions

9. Accidents, Incidents, Near Misses

   a) Personnel injuries  
   All Functions

   b) Damage to aircraft, GSE, facilities  
   All Functions

   c) Reporting  
   All Functions

   d) Investigation  
   Functions 4, 5

   e) Prevention  
   All Functions

   f) Cost of accidents, incidents  
   All Functions

   g) Risk assessment  
   All Functions

Note 5: Subject areas a) through g) are applicable to personnel as appropriate to specific function and types of operations conducted.

10. Airside Safety Supervision

   a) Creating an open reporting culture  
   Functions 4, 5

   b) Performance monitoring  
   Functions 4, 5

   c) Coordination of airside activities  
   Functions 4, 5

   d) Workload management  
   Functions 4, 5

   e) Decision making  
   Functions 4, 5

   f) Planning  
   Functions 4, 5
## ATTACHMENT C

### SAFETY HAZARD REPORT FORM

_The information contained in this Report will be treated confidentially and for the sole purpose of accident and incident prevention. Identities of persons will not be disclosed._

<table>
<thead>
<tr>
<th>Section 1 – Details of the Reporting Person (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong></td>
</tr>
<tr>
<td><strong>Organization/Unit:</strong></td>
</tr>
<tr>
<td><strong>E-mail:</strong></td>
</tr>
<tr>
<td><strong>Mobile:</strong></td>
</tr>
<tr>
<td><strong>Date of Report:</strong></td>
</tr>
<tr>
<td><strong>Reception:</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Section 2 – Details of the Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location:</strong></td>
</tr>
<tr>
<td><strong>Description of the Hazard (Please provide as much details as possible)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 3 – Point of view (Contribute by sharing your point of view)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Was the hazard reported earlier?</strong></td>
</tr>
<tr>
<td><strong>Can the hazard be reduced or eliminated? How?</strong></td>
</tr>
<tr>
<td><strong>Were actions already taken to eliminate or reduce the hazard?</strong></td>
</tr>
<tr>
<td><strong>Additional comments or suggestions</strong></td>
</tr>
</tbody>
</table>

Please forward this Report to HKIA ASO – HKIA Tower – Building Third floor, Office # 307  
E-mail: oakbflightsafety@gmail.com  +93 20 231 1803, +93 78 410 1263
**OCCURRENCE REPORT FORM**

*The information contained in this Report will be treated confidentially and for the sole purpose of accident and incident prevention. Identities of persons will not be disclosed.*

### Section 1 – Details of the Reporting Person (Optional)

<table>
<thead>
<tr>
<th>Name:</th>
<th>Organization/Unit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail:</td>
<td>Mobile:</td>
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<tr>
<td>Date of Report:</td>
<td>Reception:</td>
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### Section 2 – Details of the Occurrence

<table>
<thead>
<tr>
<th>Location:</th>
<th>Date/Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of the occurrence <em>(Please provide as much details as you can remember)</em></td>
<td></td>
</tr>
</tbody>
</table>

### Section 3 – Outcome of the occurrence

**Injuries** *(Please specify number of persons injured and type of injuries)*

**Damage** *(Please specify property damaged and type of damage)*

### Section 4 – Point of view *(Contribute by sharing your point of view)*

*What contributed for the occurrence?*

*Could the occurrence be prevented? How?*

*What Lessons Learned do you extract from the occurrence?*

**Additional comments or suggestions**

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Please forward this Report to HKIA ASO – HKIA Tower – Building Third floor, Office # 307
E-mail: oakbflightsafety@gmail.com  +93 20 231 1803, +93 78 410 1263