

# GM 14-25

## **CIVIL AVIATION AUTHORITY OF BANGLADESH**

## Guidance Manual

Procedure for Evaluation of Impact on Safety of the Existing Operation whenever there is Proposal for a Change in the Physical Characteristics, Facilities or Equipment at an Aerodrome



# **AERODROME STANDARD DIVISION**





## **CIVIL AVIATATION AUTHORITY OF BANGLADESH**

Guidance Manual on

## Procedure for Evaluation of Impact on Safety of the Existing Operation whenever there is Proposal for a Change in the Physical Characteristics, Facilities or Equipment at an Aerodrome

Version-2.0

28 May 2024

**Aerodrome Standard Division** 

### **RECORD OF AMENDMENTS AND CORRIGENDA**

Data Data Entand	
Date Date Entered Date Date	Entered
No. applicable entered by No. of issue entered	By

### TABLE OF CONTENTS

RECORD OF AMENDMENTS AND CORRIGENDA1				
ACRONYMS AND ABBREVIATIONS				
FOREWORD	4			
CHAPTER 1. General	5			
1.1 Purpose	5			
1.2 References: ANO 14 Vol-I Art 1.4.4	5			
1.3 Introduction	5			
1.3.1 Development	5			
1.3.2 Changes	5			
1.3.3 Maintenance	5			
Chapter 2. Management of change	6			
Chapter 3. Safety Assessments For Aerodromes	8			
3.1 introduction	8			
3.2 Scope And Applicability	8			
3.3 Basic Considerations	9			
3.4 Safety Assessment Process				
3.5 Approval Or Acceptance Of A Safety Assessment				
3.6 Promulgation Of Safety Information				
ATTACHMENT "A" TO CHAPTER 314				
ATTACHMENT B TO CHAPTER 3				
ATTACHMENT "C"				
ATTACHMENT "D"				

### ACRONYMS AND ABBREVIATIONS

ASDA	Accelerate-Stop Distance Available
ATC	Air Traffic Control
AGL	Aeronautical Ground Lighting
FOD	Foreign Object Debris
IDM	Initial Development Meeting
ILS	Instrument Landing System
LDA	Landing Distance Available
LVP	Low Visibility Procedures
MLS	Microwave Landing System
NOTAM	Notice to Airmen
RESA	Runway End Safety Area
SMS	Safety Management System
TODA	Take-Off Distance Available
TORA	Take-Off Run Available
WIP	Work in Progress

#### FOREWORD

In exercise of the powers conferred by the Section 14 of Civil Aviation Act 2017, the Chairman, Civil Aviation authority of Bangladesh has promulgated ANO-14 Vol-I by transposing the Provisions of ICAO Annex 14 Vol-1.as specific operating regulations for the Aerodrome Operators, operating in Bangladesh.

An Aerodrome Operator is expected to comply with the Regulations of the ANO-14 Vol-I. There may be circumstances where compliance of requirements by the Aerodrome Operator becomes difficult because of constraints of trained manpower, training facilities and/or other administrative formalities. These situations require CAAB to establish subject specific guidance manuals.

Provisions of ANO-14 Vol-I require that Aerodrome Operator evaluates the Impact on Safety of the Existing Operation whenever there is Proposal for a Change in the Physical Characteristics, Facilities or Equipment at an Aerodrome

This GM has been derived from the ANO-14, VOL-I, Doc 9981 and Doc 9859. It provides guidance to aerodrome operators on the procedures to be used to evaluate the impact on safety of the existing operation whenever there is a proposal for change at aerodrome and to notify on the development at aerodromes and other associated changes to the physical characteristics, facilities or equipment of the aerodrome with a view to ensure that the changes comply with aerodrome operation required by certification/licensing criteria and safe management of the resulting changes.

It is expected that the concerned Aerodrome Operator will take this GM as a reference/guidance material in evaluating the Impact on Safety of the Existing Operation whenever there is proposal for a change in the Physical Characteristics, Facilities or Equipment at an Aerodrome

This GM is issued under the authority of the Chairman, CAAB and will become effective on the date mentioned in the document and will supersede the Aerodrome Advisory Circular (AC (AD) No-11) issued on 26 June 2011 on the same subject.

**Air Vice Marshal M Mafidur Rahman** BBP, BSP, BUP, ndu, afwc, psc Chairman Civil Aviation Authority of Bangladesh

## **CHAPTER 1. General**

#### 1.1 Purpose

The purpose of this document is to provide guidance to aerodrome operators on the procedures to be used to evaluate the impact on safety of the existing operation whenever there is a proposal for change at aerodrome and to notify the Chairman on the development at aerodromes and other associated changes to the physical characteristics, facilities or equipment of the aerodrome with a view to ensure that the changes comply with aerodrome operation required by certification/licensing criteria and safe management of the resulting changes.

#### 1.2 References: ANO 14 Vol-I Art 1.4.4

#### 1.3 Introduction

Projects that involve changes to the aerodrome physical characteristics fall into 3 categories:

#### 1.3.1 **Development**

Where new or upgraded infrastructure is to be provided: Examples include new or extensions to buildings, aerodrome infrastructure (such as runway, taxiways and aprons), visual aids and navigation aids.

#### 1.3.2 Changes

Where existing aerodrome infrastructure or physical characteristics are being changed: for example reconfiguration of stands, changes to the runway or declared distances. Changes include projects that involve removing or amending existing aerodrome certificate/license variations.

#### 1.3.3 Maintenance

Where existing aerodrome infrastructure is being repaired, refurbished or replaced: to ensure continuance but without changing the characteristics of the piece of infrastructure.

#### **Chapter 2. Management of change**

2.1 As part of their SMS, aerodrome operators should have in place procedures to identify changes and to examine the impact of those changes on aerodrome operations.

*Note 1.— Changes on an aerodrome can include changes to procedures, equipment, infrastructures and special operations.* 

*Note 2.— Further guidance on the management of change can be found in Doc 9859 —* Safety Management Manual (SMM).

2.2 A safety assessment will be carried out to identify hazards and propose mitigation actions for all changes that are found to have an impact on the aerodrome operations.

Note 1.— Depending on the scope of the envisaged change as well as the level of the impact on operations, the methodology and level of detail required to carry out the required safety assessment may vary.

Note 2.— The types of changes that have to be assessed are described in 2.3, and the key principles on safety assessments are available in Chapter 3 — Safety Assessments for Aerodromes.

2.3 Need for a safety assessment according to the category of changes

2.3.1 *Routine tasks*. Changes related to routine tasks do not have to be assessed using the safety assessment methodology developed in Chapter 3 because these tasks are established and managed through specific procedures, training, feedback and reviews.

Note.— Routine tasks can be described as the actions related to an activity or service that are detailed in formal procedures, which are subject to periodic review, and for which the personnel in charge are adequately trained. These tasks may include movement area inspections, grass cutting on runway strips, sweeping of apron areas, regular and minor maintenance of runways, taxiways, visual aids, radio navigation and electrical systems.

2.3.1.1 The actions resulting from the regular assessment, feedback and review process related to these tasks should ensure that any changes related to them are managed, thus ensuring the safety of the specific task. However, a change related to a routine task for which feedback is not yet sufficient cannot be considered as sufficiently mature. Therefore, a safety assessment using the methodology developed in Chapter 3 should be carried out.

2.3.2 *Specific changes*. Impact on the safety of aerodrome operations may result from:

a) changes in the characteristics of infrastructures or the equipment;

b) changes in the characteristics of the facilities and systems located in the movement area;

c) changes in runway operations (e.g. type of approach, runway infrastructure, holding positions);

d) changes to the aerodrome networks (e.g. electrical and telecommunication);

e) changes that affect conditions as specified in the aerodrome's certificate/license;

f) long-term changes related to contracted third parties;

g) changes to the organizational structure of the aerodrome; and

h) changes to the operating procedures of the aerodrome.

*Note.— When the change involves an aeroplane type/model new to the aerodrome, a compatibility study* is to be conducted.

2.3.2.1 For any change in aerodrome operations as defined above, a safety assessment should be conducted.

## **Chapter 3. Safety Assessments For Aerodromes**

Note 1.— The objective of a safety assessment, as part of the risk management process of an SMS, is described in 3.3.1.

Note 2.— Where alternative measures, operational procedures and operating restrictions have been developed arising from safety assessments, these should be reviewed periodically to assess their continued validity. The procedures in this chapter do not substitute or circumvent the provisions contained in ANO 14, Volume I. It is expected that infrastructure on an existing aerodrome or a new aerodrome will fully comply with the requirements in the ANO.

#### 3.1 introduction

3.1.1 A certified / licensed aerodrome operator as appropriate implements an SMS acceptable to the Chairman that, as a minimum.

a) identifies safety hazards;

b) ensures that remedial action necessary to maintain safety is implemented;

c) provides for continuous monitoring and regular assessment of the achieved safety; and

d) aims to make continuous improvement to the overall safety of the aerodrome.

Note 1.— Annex 19 — Safety Management contains the framework for the implementation and maintenance of an SMS by a certified aerodrome. Annex 19, Appendix 2, contains a description of the four components comprising the framework, i.e. safety policy and objectives, safety risk management, safety assurance and safety promotion.

Note 2.— Further guidance on SMS is available in Doc 9859, Safety Management Manual (SMM).

3.1.2 This chapter describes how a safety assessment can be undertaken as part of the aerodrome's SMS. By applying the methodology and procedures described here, the aerodrome operator can demonstrate compliance with the minimum requirements described in 3.1.1.

#### 3.2 Scope And Applicability

3.2.1 The following sections present, inter alia, a general methodology to conduct safety assessments on an aerodrome. Additional tools and particularly appropriate checklists, can help identify hazards, assess safety risks and eliminate or mitigate those risks when necessary. The suitability of the mitigation proposed and the need for alternative measures, operational procedures or operating restrictions for the specific operations concerned should be comprehensively evaluated. Section 3.4 details the process how to achieve/ validate the conclusion of the safety assessment, when appropriate, to ensure safety is not compromised. Section 3.5 describes procedures on the approval or acceptance of a safety assessment. Section 3.6 specifies how to promulgate appropriate information for use by the various aerodrome stakeholders and particularly by the pilots and aircraft operators.

3.2.2 The safety assessment process addresses the impact of a safety concern, including a change or deviation, on the safety of operations at the aerodrome and takes into consideration the aerodrome's capacity and the efficiency of operations, as necessary.

#### **3.3 Basic Considerations**

3.3.1 A safety assessment is an element of the risk management process of an SMS that is used to assess safety concerns arising from, inter alia, deviations from standards and applicable regulations, identified changes at an aerodrome specified in Chapter 2, or when any other safety concerns arise.

*Note.*— *Changes on an aerodrome can include changes to procedures, equipment, infrastructures, safety works, special operations, regulations, organization, etc.* 

3.3.2 When a safety concern, change or a deviation has an impact on several aerodrome stakeholders, consideration shall be given to the involvement of all stakeholders affected in the safety assessment process. In some cases, the stakeholders impacted by the change will need to conduct a separate safety assessment themselves in order to fulfil the requirements of their SMSs and coordinate with other relevant stakeholders. When a change has an impact on multiple stakeholders, a collaborative safety assessment should be conducted to ensure compatibility of the final solutions.

3.3.3 A safety assessment considers the impact of the safety concern on all relevant factors determined to be safety-significant. The list below provides a number of items that may need to be considered when conducting a safety assessment. The items in this list are not exhaustive and in no particular order:

a) aerodrome layout, including runway configurations; runway length; taxiway, taxilane and apron configurations; gates; jet bridges; visual aids; and the RFF services infrastructure and capabilities;

b) types of aircraft, and their dimensions and performance characteristics, intended to operate at the aerodrome;

c) traffic density and distribution;

d) aerodrome ground services;

e) air-ground communications and time parameters for voice and data link communications;

- f) type and capabilities of surveillance systems and the availability of systems providing controller support and alert functions;
- g) flight instrument procedures and related aerodrome equipment;

h) complex operational procedures, such as collaborative decision-making (CDM);

i) aerodrome technical installations, such as advanced surface movement guidance and control systems (A-SMGCS) or other air navigation aids;

j) obstacles or hazardous activities at or in the vicinity of the aerodrome;

k) planned construction or maintenance works at or in the vicinity of the aerodrome;l) any local or regional hazardous meteorological conditions (such as wind shear); and

m) airspace complexity, ATS route structure and classification of the airspace, which may change the pattern of operations or the capacity of the same airspace.

3.3.4 Subsequent to the completion of the safety assessment, the aerodrome operator is responsible for implementing and periodically monitoring the effectiveness of the identified mitigation measures.

3.3.5 The Aerodrome Standard Division of FSR reviews the safety assessment provided by the aerodrome operator and its identified mitigation measures, operational procedures and operating restrictions, as required in 3.4, and is responsible for the subsequent regulatory oversight of their application.

#### 3.4 Safety Assessment Process

#### **3.4.1 Introduction**

Note.— Guidance on continuous improvement of the SMS as part of the safety assurance component of the SMS framework is available in Doc 9859.

3.4.1.1 The primary objective of a safety assessment is to assess the impact of a safety concern such as a design change or deviation in operational procedures at an existing aerodrome.

3.4.1.2 Such a safety concern can often impact multiple stakeholders; therefore, safety assessments often need to be carried out in a cross-organizational manner, involving experts from all the involved stakeholders. Prior to the assessment, a preliminary identification of the required tasks and the organizations to be involved in the process is conducted.

3.4.1.3 A safety assessment is initially composed of four basic steps:

a) definition of a safety concern and identification of the regulatory compliance;

b) hazard identification and analysis;

c) risk assessment and development of mitigation measures; and

d) development of an implementation plan for the mitigation measures and conclusion of the assessment.

*Note 1.— A safety assessment process flow chart applicable for aerodrome operations is provided in Attachment A* to this chapter; a generic safety risk management process can be found in Doc 9859.

Note 2.— Certain safety assessments may involve other stakeholders such as ground handlers, aeroplane operators, air navigation service providers (ANSPs), flight procedure designers and providers of radio navigation signals, including signals from satellites.

#### 3.4.2 Definition of a safety concern and identification of the regulatory compliance

3.4.2.1 Any perceived safety concerns are to be described in detail, including timescales, projected phases, location, stakeholders involved or affected as well as their potential influence on specific processes, procedures, systems and operations.

#### 3.4.3 Hazard identification

3.4.3.1 Hazards related to infrastructure, systems or operational procedures are initially identified using methods such as brain-storming sessions, expert opinions, industry knowledge, experience and operational judgement. The identification of hazards is conducted by considering:

- a) accident causal factors and critical events based on a simple causal analysis of available accident and incident databases;
- b) events that may have occurred in similar circumstances or that are subsequent to the resolution of a similar safety concern; and
- c) potential new hazards that may emerge during or after implementation of the planned changes.

3.4.3.2 Following the previous steps, all potential outcomes or consequences for each identified hazard are identified.

3.4.3.3 The appropriate safety objective for each type of hazard should be defined and detailed. This can be done through:

- a) reference to recognized standards and/or codes of practices;
- b) reference to the safety performance of the existing system;
- c) reference to the acceptance of a similar system elsewhere; and
- d) application of explicit safety risk levels.

3.4.3.4 Safety objectives are specified in either quantitative terms (e.g. identification of a numerical probability) or qualitative terms (e.g. comparison with an existing situation). The selection of the safety objective is made according to the aerodrome operator's policy with respect to safety improvement and is justified for the specific hazard.

#### 3.4.4 Risk assessment and development of mitigation measures

3.4.4.1 The level of risk of each identified potential consequence is estimated by conducting a risk assessment. This risk assessment will determine the severity of a consequence (effect on the safety of the considered operations) and the probability of the consequence occurring and will be based on experience as well as on any available data (e.g. accident database, occurrence reports).

3.4.4.2 Understanding the risks is the basis for the development of mitigation measures, operational procedures and operating restrictions that might be needed to ensure safe aerodrome operations.

3.4.4.3 The method for risk evaluation is strongly dependent on the nature of the hazards. The risk itself is evaluated by combining the two values for severity of its consequences and probability of occurrence.

*Note.*—*A risk categorization tool in the form of a safety risk (index) assessment matrix is available in Doc 9859.* 

3.4.4.4 Once each hazard has been identified and analysed in terms of causes, and assessed for severity and probability of its occurrence, it must be ascertained that all associated risks are appropriately managed. An initial identification of existing mitigation measures must be conducted prior to the development of any additional measures.

3.4.4.5 All risk mitigation measures, whether currently being applied or still under development, are evaluated for the effectiveness of their risk management capabilities.

Note.— The exposure to a given risk (e.g. duration of a change, time before implementation of corrective actions, traffic density) is taken into account in order to decide on its acceptability.

3.4.4.6 In some cases, a quantitative approach may be possible, and numerical safety objectives can be used. In other instances such as changes to the operational environment or procedures, a qualitative analysis may be more relevant.

3.4.4.7 Guidance on risk assessment models for aerodrome operators can be found in Attachment B.

#### 3.4.5 Development of an implementation plan and conclusion of the assessment

3.4.5.1 The last phase of the safety assessment process is the development of a plan for the implementation of the identified mitigation measures.

3.4.5.2 The implementation plan includes time frames, responsibilities for mitigation measures as well as control measures that may be defined and implemented to monitor the effectiveness of the mitigation measures.

#### 3.5 Approval Or Acceptance Of A Safety Assessment

Note.— The safety assessment conducted by the aerodrome operator is a core SMS function. Management approval and implementation of the safety assessment, including future updates and maintenance, are the responsibility of the aerodrome operator. The State may, for specific reasons, require the submission of the specific safety assessment for approval/acceptance.

3.5.1 The safety assessments are subject to approval or acceptance by the Chairman.

3.5.2 Where required in 3.5.1, a safety assessment subject to approval or acceptance by the Chairman shall be submitted by the aerodrome operator prior to implementation.

3.5.3 The Aerodrome Standard Division (ASD) of FSR analyses the safety assessment and verifies that:

a) appropriate coordination has been performed between the concerned stakeholders;

b) the risks have been properly identified and assessed, based on documented arguments (e.g. physical or Human Factors studies, analysis of previous accidents and incidents);

c) the proposed mitigation measures adequately address the risk; and

d) the time frames for planned implementation are acceptable.

#### GM 14-25

3.5.4 On completion of the analysis of the safety assessment, the ASD:

a) either gives formal approval or acceptance of the safety assessment to the aerodrome operator as required in 3.5.1; or

b) if some risks have been underestimated or have not been identified, coordinates with the aerodrome operator to reach an agreement on safety acceptance; or

c) if no agreement can be reached, rejects the proposal for possible resubmission by the aerodrome

operator; or

d) may choose to impose conditional measures to ensure safety.

3.5.5 The ASD should ensure that the mitigation or conditional measures are properly implemented and that they fulfil their purpose.

#### 3.6 Promulgation Of Safety Information

3.6.1 The aerodrome operator determines the most appropriate method for communicating safety information to the stakeholders and ensures that all safety-relevant conclusions of the safety assessment are adequately communicated.

3.6.2 In order to ensure adequate dissemination of information to interested parties, information that affects the current integrated aeronautical information package (IAIP) or other relevant safety information is:

a) promulgated in the relevant section of the IAIP or automatic terminal information service (ATIS); and

b) published in the relevant aerodrome information communications through appropriate means.

## **ATTACHMENT "A" TO CHAPTER 3**

#### SAFETY ASSESSMENT FLOWCHART



Figure I-3-Att A-1. Flow chart to be used for the conduct of a safety assessment

## **ATTACHMENT B TO CHAPTER 3**

#### SAFETY ASSESSMENT METHODOLOGIES FOR AERODROMES

*Note.*—*Further guidance on safety risk probability, severity, tolerability and assessment matrix can be found in Doc 9859*—Safety Management Manual (SMM).

1. Depending on the nature of the risk, three methodologies can be used to evaluate whether it is being appropriately managed:

- a) *Method type "A"*. For certain hazards, the risk assessment strongly depends on specific aeroplane and/or system performance. The risk level is dependent upon aeroplane/system performance (e.g. more accurate navigation capabilities), handling qualities and infrastructure characteristics. Risk assessment, then, can be based on aeroplane/system design and validation, certification, simulation results and accident/incident analysis;
- b) *Method type "B"*. For other hazards, risk assessment is not really linked with specific aeroplane and/or system performance but can be derived from existing performance measurements. Risk assessment, then, can be based on statistics (e.g. deviations) from existing operations or on accident analysis; development of generic quantitative risk models can be well adapted;
- c) *Method type "C"*. In this case, a "risk assessment study" is not needed. A simple logical argument may be sufficient to specify the infrastructure, system or procedure requirements, without waiting for additional material, e.g. certification results for newly announced aeroplanes or using statistics from existing aeroplane operations.

#### Risk assessment method

2. The risk assessment takes into account the probability of occurrence of a hazard and the severity of its consequences; the risk is evaluated by combining the two values for severity and probability of occurrence.

3. Each identified hazard must be classified by probability of occurrence and severity of impact. This process of risk classification will allow the aerodrome to determine the level of risk posed by a particular hazard. The classification of probability and severity refers to potential events.

4. The severity classification includes five classes ranging from "catastrophic" (class A) to "not significant" (class E). The examples in Table I-3-Att B-1, adapted from Doc 9859 with aerodrome-specific examples, serve as a guide to better understand the definition.

5. The classification of the severity of an event should be based on a "credible case" but not on a "worst case" scenario. A credible case is expected to be possible under reasonable conditions (probable course of events). A worst case may be expected under extreme conditions and combinations of additional and improbable hazards. If worst cases are to be introduced implicitly, it is necessary to estimate appropriate low frequencies.

Severity	Meaning	Value	Example
Catastrophic	<ul> <li>Equipment destroyed</li> <li>Multiple deaths</li> </ul>	А	<ul> <li>collision between aircraft and/or other object during take-off or landing</li> </ul>
Hazardous	<ul> <li>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</li> <li>Serious injury</li> <li>Major equipment damage</li> </ul>	В	<ul> <li>runway incursion, significant potential for an accident, extreme action to avoid collision</li> <li>attempted take-off or landing on a closed or engaged runway</li> <li>take-off/landing incidents, such as undershooting or overrunning</li> </ul>
Major	<ul> <li>A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of an increase in workload or as a result of conditions impairing their efficiency</li> <li>Serious incident</li> <li>Injury to persons</li> </ul>	С	<ul> <li>runway incursion, ample time and distance (no potential for a collision)</li> <li>collision with obstacle on apron/ parking position (hard collision)</li> <li>person falling down from height</li> <li>missed approach with ground contact of the wing ends during the touchdown</li> </ul>

## Table I-3-Att B-1. Severity classification scheme with examples

#### VERSION-2.0

GM	14-25
UIVI	1 - 2 J

Severity	Meaning	Value	Example
Minor	<ul> <li>Nuisance</li> <li>Operating limitations</li> <li>Use of emergency procedures</li> <li>Minor incident</li> </ul>	D	<ul> <li>hard braking during landing or taxiing</li> <li>damage due to jet blast (objects)</li> <li>expendables are laying around the stands</li> <li>collision between maintenance vehicles on service road</li> <li>breakage of drawbar during pushback (damage to the aircraft)</li> <li>slight excess of maximum take-off weight without safety consequences</li> <li>aircraft rolling into passenger bridge with no damage to the aircraft needing immediate repair</li> <li>forklift that is tilting</li> <li>complex taxiing instructions/procedures</li> </ul>
Negligible	– Few consequences	Е	<ul> <li>slight increase in braking distance</li> <li>temporary fencing collapsing because of strong winds</li> <li>cart losing baggage</li> </ul>

6. The probability classification includes five classes ranging from "extremely improbable" (class 1) to "frequent" (class 5) as shown in Table I-3-Att B-2.

7. The probability classes presented in Table I-3-Att B-2 are defined with quantitative limits. It is not the intention to assess frequencies quantitatively; the numerical value serves only to clarify the qualitative description and support a consistent expert judgement.

Probability class	Meaning
5 Frequent	Likely to occur many times (has occurred
4 Reasonably probable	Likely to occur sometimes (has occurred infrequently)
3 Remote	Unlikely to occur (has occurred rarely)
2 Extremely remote	Very unlikely to occur (not known to have
1 Extremely improbable	Almost inconceivable that the event will occur

#### Table I-3-Att B-2. Probability classification scheme

8. The classification refers to the probability of events per a period of time. This is reasoned through the following:

a) many hazards at aerodromes are not directly related to aircraft movements; and

b) the assessment of hazards occurrence probabilities can be based on expert judgement without any calculations.

9. The aim of the matrix is to provide a means of obtaining a safety risk index. The index can be used to determine tolerability of the risk and to enable the prioritization of relevant actions in order to decide about risk acceptance.

10. Given that the prioritization is dependent on both probability and severity of the events, the prioritization criteria will be two-dimensional. Three main classes of hazard mitigation priority are defined in Table I-3-Att B-3:

a) hazards with high priority — intolerable;

b) hazards with mean priority - tolerable; and

c) hazards with low priority — acceptable.

11. The risk assessment matrix has no fixed limits for tolerability but points to a floating assessment where risks are given risk priority for their risk contribution to aircraft operations. For this reason, the priority classes are intentionally not edged along the probability and severity classes in order to take into account the imprecise assessment.

D' 1	Risk severity				
probability	Catastrophic A	Hazardous <b>B</b>	Major C	Minor D	Negligible E
Frequent <b>5</b>	5A	5B	<b>5</b> C	5D	<b>5</b> E
Occasional 4	4A	<b>4B</b>	<b>4</b> C	4 <b>D</b>	<b>4</b> E
Remote 3 3A		3B	<b>3</b> C	3D	<b>3E</b>
Improbable 2	2A	2B	<b>2</b> C	2D	<b>2E</b>
Extremely Improbable 1	1A	1B	1C	1D	1E

Table I-3-Att B-3. Safety Risk Assessment Matrix

### ATTACHMENT "C"

## NOTIFICATION FORM OF THE CHANGES TO THE PHYSICAL CHARACTERISTICS, FACILITIES OR EQUIPMENT AT AERODROME.

#### Procedures to evaluate the impact on Safety by the proposed change in the Physical characteristics, Facilities or Equipment at an Aerodrome

Evaluation will be done on the basis of following:-

1.	Name & Address of the Aerodrome:
2.	Accountable Manager:
	Name:
	TelephoneE-mail:
3.	Location of the proposed work:
4.	Proposed date of starting the work:
5.	Duration of the proposed work:
6.	Estimated Completion Date:
7.	Aerodrome closed during Work in Progress? YES/NO (Delete as applicable)
8.	Impact on obstacle limitation surfaces(OLS):
9.	WGS 84 coordinates in degrees, minutes, and seconds of Structure:
	Ground height at site location:
	Maximum height of Structure:

#### **10. STRIP CLEARANCES**

- a) Structure(s) outside Runway & Taxiway Strip: YES / NO (Delete as applicable)
- b) Structure(s) outside Runway Cleared & Graded Area: YES / NO (Delete as applicable)

If 'No', please provide details below:

.....

.....

.....

11. FOR RUNWAY EXTENSIONS, DETAILS OF DECLARED DISTANCES

TODA: TORA: LDA: ASDA:

- 12. RUNWAY STATUS
- 12.1 Existing: Non-Instrument/Instrument\* (Delete as applicable)
- 12.2 Proposed: Non-Instrument/Instrument\* (Delete as applicable)
- (\* For example, ILS / MLS)
- 13. Nature of the proposed changes: (Appropriate one will be taken)

Physical characteristics of any part of Movement area or Airport terminal building.

Introduction of new Facility.

Installation of new Equipment.

Any other (brief description):

14. Details of the proposed change:

15. Supporting Documents along with Risk assessment & Mitigation Matrix (Attached)

## ATTACHMENT "D"

### Procedure to accept or reject the evaluation conducted by the Aerodrome operator

On getting the proposal from Aerodrome Operator the following regularity actions will be taken at the CAAB HQ:-

Action Steps	Action office	Actions
1.	Executive Director/Direct or/APM	<ul> <li>a) Shall verify the justification of the proposed change with available documents along with Risk Assessment &amp; Mitigation;</li> <li>b) Forward it to Member (FS&amp;R), CAAB for validation.</li> </ul>
2.	Member (FS&R)	a) Forward Director, ASD for necessary comments.
3.	Director (ASD)	<ul> <li>a) Verify the safety aspect of the proposed change with available documents;</li> <li>b) If necessary, conduct a physical inspection of the proposed site through the Aerodrome Inspector(s) for resolution;</li> <li>c) If acceptable, forward the report, with appropriate recommendation to MFSR for onward approval from Chairman.</li> <li>d) After getting the approval from Chairman, he will send letter of approval to the Aerodrome operator for onward necessary action.</li> </ul>
4.	Director (ASD)	a) If not acceptable, return back to MFSR with proper justification for onward forwarding to the concerned sender.