



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**THE SECOND MEETING OF THE APANPIRG AERODROMES
OPERATIONS AND PLANNING – WORKING GROUP (AOP/WG/2)**

Yogyakarta, Indonesia, 3 – 5 June 2014

Agenda Item 4: Provision of AOP in the Asia/Pacific Region
**HELIPORT SAFETY AREAS – INCONSISTENCIES IN
ANNEX 14 VOLUME II HELIPORT STANDARDS**

(Presented by Indonesia)

SUMMARY

Annex 14 Volume II Heliport specifies that surface level and elevated heliports shall be provided with at least one final approach and take-off area (FATO), and a FATO shall be surrounded by a safety area which need not be solid.

The standard dimension for safety areas whether at surface level heliport or elevated heliport when described together with FATO dimension is $1.5D (D+0.25D+0.25D)$ as stated in Para 3.1.22 and 3.2.21. The standard further states that

- a) each external side of the safety area shall be at least $2 D$ where the FATO is quadrilateral; or
- b) the outer diameter of the safety area shall be at least $2 D$ where the FATO is circular.

The meeting is invited to note the inconsistencies and invite ICAO to review the Annex 14, Volume II standards (Paras 3.1.22 and 3.2.21) for safety areas at surface level heliport and elevated heliport.

Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

Global Plan Initiatives:

GPI-13 Aerodrome Design and Management

1. INTRODUCTION

1.1 Annex 14 Volume II contains the planning, design and operations of Heliports. The specification in Annex 14 Volume II shall apply to all heliports intended to be used by helicopters in international civil aviation. Heliport is an aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters. There are four types of heliport which are surface level heliport, elevated heliport, helideck and shipboard heliport.

1.2 Surface level and elevated Heliport shall be provided with at least one final approach and take-off area (FATO), and a FATO shall be surrounded by a safety area which need not be solid. A safety area is a defined area on a heliport surrounding the FATO which is free of obstacles, other than those required for air navigation purposes, and intended to reduce the risk of damage to helicopters accidentally diverging from the FATO.

2. DISCUSSION

Surface Level Heliport

2.1 The standard in Para 3.1.1 of Annex 14 Volume II states that - *A surface-level heliport shall be provided with at least one final approach and take-off area (FATO) and the standard in Para 3.1.3 states that - The dimensions of a FATO shall be:*

- a) *where intended to be used by helicopters operated in performance class 1, as prescribed in the Helicopter Flight Manual (HFM) except that, in the absence of width specifications, the width shall be not less than the greatest overall Dimension (D) of the largest helicopter the FATO is intended to serve;*
- b) *where intended to be used by helicopters operated in performance class 2 or 3, of sufficient size and shape to contain an area within which can be drawn a circle of diameter not less than:*
 - 1) *1 D of the largest helicopter when the Maximum Take-Off Mass (MTOM) of helicopters the FATO is intended to serve is more than 3 175 kg;*
 - 2) *0.83 D of the largest helicopter when the MTOM of helicopters the FATO is intended to serve is 3 175 kg or less.*

2.2 The standard in Para 3.1.22 of Annex 14 Volume II states that - *A safety area surrounding a FATO shall extend outwards from the periphery of the FATO for a distance of at least 3 m or 0.25 D, whichever is greater, of the largest helicopter the FATO is intended to serve and:*

- a) *each external side of the safety area shall be at least 2 D where the FATO is quadrilateral; or*
- b) *the outer diameter of the safety area shall be at least 2 D where the FATO is circular.*

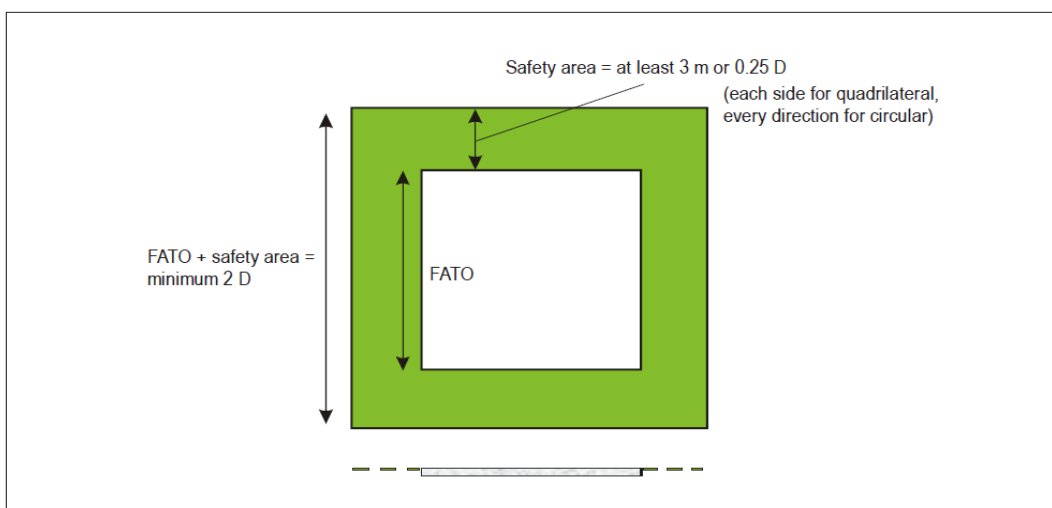


Figure 3-1. FATO and associated safety area

Elevated Heliport

2.3 The standard in Para 3.2.2 of Annex 14 Volume II states that - *An elevated heliport shall be provided with one FATO* and the standard in Para 3.2.4 states that - *The dimensions of the FATO shall be:*

- a) *where intended to be used by helicopters operated in performance class 1, as prescribed in the Helicopter Flight Manual (HFM) except that, in the absence of width specifications, the width shall be not less than 1 D of the largest helicopter the FATO is intended to serve;*
- b) *where intended to be used by helicopters operated in performance class 2 or 3, of sufficient size and shape to contain an area within which can be drawn a circle of diameter not less than:*
 - 1) *1 D of the largest helicopter when the MTOM of helicopters the FATO is intended to serve is more than 3 175 kg;*
 - 2) *0.83 D of the largest helicopter when the MTOM of helicopters the FATO is intended to serve is 3 175 kg or less.*

2.4 The standard in Para 3.2.21 of Annex 14 Volume II states that - *A safety area surrounding a FATO intended to be used by helicopters operated in performance class 1 in Visual Meteorological Conditions (VMC) shall extend outwards from the periphery of the FATO for a distance of at least 3 m or 0.25 D, whichever is greater, of the largest helicopter the FATO is intended to serve and:*

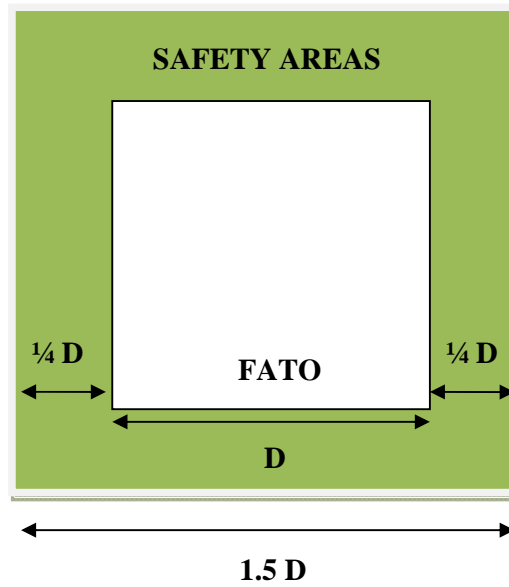
- a) *each external side of the safety area shall be at least 2 D where the FATO is quadrilateral; or*
- b) *the outer diameter of the safety area shall be at least 2 D where the FATO is circular.*

2.5 The standard in Para 3.2.22 of Annex 14 Volume II states - *A safety area surrounding a FATO intended to be used by helicopters operated in performance class 2 or 3 in Visual Meteorological Conditions (VMC) shall extend outwards from the periphery of the FATO for a distance of at least 3 m or 0.5 D, whichever is the greater, of the largest helicopter the FATO is intended to serve and:*

- a) *each external side of the safety area shall be at least 2 D where the FATO is quadrilateral; or*
- b) *the outer diameter of the safety area shall be at least 2 D where the FATO is circular.*

Inconsistency in Annex 14, Volume II Standard for heliport safety areas

2.6 The standard dimension for safety areas whether at surface level heliport or elevated heliport if described together with FATO dimension as per figure below. FATO is D plus safety areas 0.25D at each side, total for safety areas should be 1.5D (D+0.25D+0.25D), not 2D. It seems there is inconsistency for dimension of safety areas at surface level heliport and elevated heliport.



3. ACTION BY THE MEETING

3.1 The Meeting is invited to note the inconsistencies and invite ICAO to review the Annex 14, Volume II standards (Paras 3.1.22 and 3.2.21) for safety areas at surface level heliport and elevated heliport.

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