



CIVIL AVIATION ADVISORY PUBLICATION

CAAP 65 (Issue June 2012)

AIRSPACE USER REQUIREMENTS

***GUIDANCE AND INFORMATION FOR CONCERNED AUTHORITIES AND APPLICANTS,
INVOLVING OBJECTS AND ACTIVITIES AFFECTING NAVIGABLE AIRSPACE***

1 TABLE OF CONTENTS

2	INTRODUCTION	2
3	PURPOSE	2
4	STATUS OF THIS CAAP	2
5	APPLICABILITY	2
6	REFERENCES	3
7	NOTIFICATION REQUIREMENTS	3
	(a) Construction or alternation of a structure	3
	(b) Unmanned Free flight Objects such as Meteorological Balloons, cluster balloons, sky lanterns:	4
	(c) Tethered objects incl. balloons, advertising balloons, Parasails and paragliders	4
	(d) Other objects or lights	4
	(E) CAR 3.66 NOTICE REQUIREMENTS	6
8	DEFINITIONS	7
9	APPROPRIATE AUTHORITY CONTACTS	8
10	Laser Zones.	9

2 INTRODUCTION

The General Civil Aviation Authority (GCAA), as the UAE Competent Authority responsible for aviation safety, has the primary objective to protect the UAE population and travelling public. Whilst the GCAA conducts its safety oversight functions to the highest standard there are areas, which need to be coordinated with the appropriate Emirate Civil Aviation authority and other participants in the UAE aviation system, so that flight safety is assured.

CAR Part VIII, Subpart 3 was recently published and contains Regulations establishing various classifications and categories of airspace as well as prescribing, in Section 2, Rules:

- For persons proposing to construct or alter a structure that could pose a hazard in navigable airspace and,
- Regarding the use of a structure, lights, lasers, weapons, or pyrotechnics that could pose a hazard in navigable airspace.

As a result of these Regulatory changes, this CAAP has been developed to incorporate the new requirements. CAAP 16 has been revised to refer only to aerial work activities rather than to aerial work and objects affecting airspace.

All of the above activities require the approval of the appropriate Emirate Civil Aviation authority, be it Department of Civil Aviation or Civil Aviation Authority, hereafter known as the Appropriate Authority. For those Emirates without an aviation authority, the approval shall be sought from the GCAA.

3 PURPOSE

3.1 The purpose of this CAAP is to inform the Appropriate Authorities, general public, building developers, promoters, municipalities and concerned authorities of the types of hazards affecting navigable airspace, the permitted airspace activities, as well as the notification mechanism for approval of these activities.

3.2 Unauthorised construction, weapons use, pyrotechnics, and lights penetrating any airspace may interfere with the safe navigation of aircraft. Most of these occurrences have been the result of the public erecting an obstructing object or using lights or pyrotechnics in areas where limitations have been imposed by the GCAA or the local authorities, although there have been recorded cases of intentional occurrences

4 STATUS OF THIS CAAP

This is the first issue of CAAP 65: AIRSPACE USER REQUIREMENTS. It will remain current unless withdrawn or superseded. CAAP 16 Special Airspace User Requirements, dated 15 March 2004, is being revised to reflect the relocation of many of its items to this new CAAP.

5 APPLICABILITY

This CAAP is applicable to any individual or organisation wishing to carry out any of the activities listed below:

- (a) Construction or alteration of a structure
- (b) Free Flight Objects
 - i. Balloons, including meteorological, promotional or cluster balloons
 - ii. Model aircraft
- (c) Tethered objects
 - i. Balloons, including advertising balloons
 - ii. Kites
 - iii. Parasail and derivatives
- (d) Other objects or lights
 - i. Rockets
 - ii. Pyrotechnic displays
 - iii. Laser and searchlights
- (e) Small arms weapons ranges
- (f) Blasting activities

6 REFERENCES

- UAE Civil Aviation Regulations (CAR) Part VIII (Air Navigation Regulation), especially Subpart 3 (Navigable Airspace)
- UAE Civil Aviation Regulations (CAR) Part IX (Aerodromes)

7 NOTIFICATION REQUIREMENTS

This section contains the means of identifying whether or not a construction or activity needs to be notified to the Appropriate Authority and their approval obtained. Notification shall be made on ANF-ATM-005 Airspace Form available in the download section of the GCAA website.

(a) Construction or alternation of a structure.

CAR Part VIII, Subpart 3, CAR 3.61 states that:

A person proposing to construct or alter a structure shall notify the Appropriate Authority of the proposal in accordance with CAR Part VIII, Subpart 3, paragraph 3.66 if the proposed structure or alteration to a structure-

1. Extends more than 60m in height above the ground level at its site;
2. Extends more than 18m in height above the canopy level, defined as the surface of the earth supplemented by the vegetation height, and is located in an area of low level aerial activity or other low flying activity, or in a low flying zone or low level route as prescribed under Section 1 of this Subpart;
3. Is located below the approach or take-off surfaces of an aerodrome as described in Appendix 13 to CAR Part IX, and extends to a height

greater than a surface extending outward and upward at one of the following:

- i. a slope of 1:83 from the fan origin of the take-off surface of a runway where the runway is used or intended to be used by aircraft with a MCTOW above 5700 kg;
 - ii. a slope of 1:25 from the nearest point of the safety area of a heliport;
4. Penetrates the conical, inner horizontal, or transitional side surface of an aerodrome as-
- i. specified in CAR Part IX;
 - ii. as defined in the applicable airport safeguarding documentation.

(b) Unmanned Free flight Objects such as Meteorological Balloons, cluster balloons, sky lanterns:

It is recognised that balloons would not have a detrimental effect on the performance of a turbine engine, however pilots would manoeuvre an aircraft to avoid a large number of them, therefore to minimise the risk of ingestion of a number of balloons or the need for avoiding action, notification of such activities is required.

Sky lanterns, however have more potential to cause damage through engine ingestion or produce FOD if landing on an airport, therefore additional restrictions on them are required. Sky lanterns shall not be released in joined together cluster, however single units may be released at the same time.

Persons, or persons representing Organisations, wishing to release any of the above:

1. within 10km of an aerodrome;
2. elsewhere, if it is expected that the objects will reach a height of more than 60m above ground level;

shall notify the relevant Appropriate Authority/Authorities in accordance with CAR Part VIII, Subpart 3, paragraph 3.66.

(c) Tethered objects including balloons, advertising balloons, Parasails and paragliders.

Treat as a structure, see (a) above.

(d) Other objects or lights

- 1 Pyrotechnic displays :
CAR 3.65 states that:
A person, or a person representing an organisation, shall notify the Appropriate Authority in accordance with CAR Part VIII, Subpart 3, paragraph 3.66 if the person or organisation proposes to stage a pyrotechnics display that involves the firing or launching of any projectile/s that has a trajectory higher than-

1. an obstacle limitation surface of an aerodrome, as specified in CAR Part IX or defined in the applicable aerodrome's safeguarding documents,
2. 45 m if within a control zone or within 4 km of an uncontrolled aerodrome boundary, and not penetrating an aerodrome obstacle limitation surface,
3. 120 m if outside a control zone, or more than 4 km from an uncontrolled aerodrome boundary.

2 Laser and searchlights:

A person proposing to operate a light or a laser shall notify the Appropriate Authority in accordance with CAR Part VIII, Subpart 3, paragraph 3.66 if-

1. Because of its glare or affect on a pilot's vision, the light or laser is liable to endanger aircraft;
2. For a laser, it would produce exposures in navigable airspace exceeding the maximum permissible exposure defined for that laser in United Arab Emirates standards;
3. It is likely to endanger aircraft by being mistaken for-
 - i. a light or part of a system of lights established or approved for display at or near an aerodrome;
 - ii. a light marking a hazard in navigable airspace;
4. The location falls within the laser protection zones around an airport, as promulgated in CAR Part IX. See item 10 below for guidance on defining laser zones.

3 Rockets :

These should be treated in the same manner as weapons, in that a projectile is launched, but not necessarily by a weapon, therefore a person, or a person representing an organisation, shall notify the Appropriate Authority in accordance with CAR Part VIII, Subpart 3, paragraph 3.66 if the person or organisation proposes to launch a projectile that has a trajectory higher than-

1. an obstacle limitation surface of an aerodrome, as specified in CAR Part IX or defined in the applicable aerodrome's safeguarding documents,
2. 45 m if within a control zone or within 4 km of an uncontrolled aerodrome boundary, and not penetrating an aerodrome obstacle limitation surface,
3. 120 m if outside a control zone, or more than 4 km from an uncontrolled aerodrome boundary.

4. Weapons ranges:

CAR 3.64 states that:

A person, or a person representing an organisation, shall notify the Appropriate Authority in accordance with CAR Part VIII, Subpart 3,

paragraph 3.66 if the person or organisation proposes to use a weapon that fires or launches a projectile that has a trajectory higher than-

1. an obstacle limitation surface of an aerodrome, as specified in CAR Part IX or defined in the applicable aerodrome's safeguarding documents,
2. 45 m if within a control zone or within 4 km of an uncontrolled aerodrome boundary, and not penetrating an aerodrome obstacle limitation surface,
3. 120 m if outside a control zone, or more than 4 km from an uncontrolled aerodrome boundary.

5. Blasting activities:

These should be treated in the same manner as a weapons range, therefore a person, or a person representing an organisation, shall notify the Appropriate Authority in accordance with CAR Part VIII, Subpart 3, paragraph 3.66 if the person or organisation proposes to use a weapon that fires or launches a projectile that has a trajectory higher than-

1. an obstacle limitation surface of an aerodrome, as specified in CAR Part IX or defined in the applicable aerodrome's safeguarding documents,
2. 45 m if within a control zone or within 4 km of an uncontrolled aerodrome boundary, and not penetrating an aerodrome obstacle limitation surface,
3. 120 m if outside a control zone, or more than 4 km from an uncontrolled aerodrome boundary.

6. Exhaust efflux:

CAR 3.63 states that:

A person proposing to use a structure shall notify the Appropriate Authority of the proposal in accordance with CAR Part VIII, Subpart 3, paragraph 3.66 if-

1. The structure may discharge efflux at a velocity in excess of 4.3 m per second through an obstacle limitation surface of an aerodrome;
2. The structure may discharge efflux at a velocity in excess of 4.3 m per second higher than 60 m above ground level.

For guidance and policy on points that are not covered within this publication, advice should be sought from GCAA, Aviation Safety Affairs Sector, Air Navigation & Aerodromes Department.

(e) CAR 3.66 NOTICE REQUIREMENTS

1. Subject to CARs 3.66.b and 3.66.c, a person required to notify the Appropriate Authority under CARs 3.62, 3.63, 3.64 or 3.65 shall complete form GCAA Airspace 01, available at the end of this Regulation, and submit it to the Appropriate Authority at least-
 1. 90 days before the proposed date of commencement of construction, or alteration, under CAR 62; or

2. 5 working days before the proposed date of use under CAR 3.63, 3.64 or 3.65.
2. In the case of an emergency involving essential public services, public health, or public safety, that requires immediate construction or alteration of a structure, or use of a structure, light, laser, weapon, or pyrotechnic-
 1. The notice requirements in CAR 3.66.a do not apply; and
 2. The person responsible for the construction, alteration, or use shall complete form GCAA Airspace 01 and submit it to the Appropriate Authority within 5 working days after the construction, alteration, or use.
3. A person proposing to use a light, laser, weapon, or pyrotechnic, in a control zone prescribed under Subsection 1 of this Subpart, during times when the appropriate ATS is on watch, shall, in addition to notifying the Appropriate Authority as required in CAR 3.66.a.2, not use the light, laser, weapon, or pyrotechnic in the control zone without receiving authorisation from the ATC unit responsible for that airspace before the commencement of the use.

8 DEFINITIONS

Appropriate Authority	The body responsible for Civil Aviation Safety Matters within an Emirate.
Canopy level	The surface of the earth supplemented by the vegetation height.
Exhaust Efflux	The vertical displacement of air out of a chimney or similar construction as a result of combustion within the facility to which the exhaust is attached.
Navigable Airspace	Airspace at or above the minimum flight altitudes allowed for in Civil Aviation Regulations, including low flying areas but not including restricted or prohibited areas.
Obstacle Limitation Surface	Airspace around an aerodrome that enables operations to be conducted safely and protects the aerodrome from the growth of obstacles around the aerodrome.
Paraglider	A glider with no rigid primary structure, capable of being launched solely by the use of the pilot's legs.
Parasail	A parachute –like flexible airfoil supporting a person, which is towed behind a vehicle.
Sky lantern	A Paper lantern containing a candle or fuel cell which, when ignited, causes the lantern to rise into the air.

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10 LASER ZONES.

The following guidance material from ICAO Document 9815 AN/447 Manual on Laser Emitters and Flight Safety should be used as a reference by the DCA.

(a) Laser-beam Free Flight Zone (LFFZ) Airspace in the immediate proximity of the airport, up to and including 2,000 feet AGL, extending 2 NM in all directions measured from the runway centreline. Additionally, the LFZ includes a 3 NM extension, 2,500 feet each side of the extended runway centreline, up to 2,000' AGL of each useable runway surface. The level of laser light is restricted to a level that should not cause any visual disruption. Refer to Figure 1.

(b) Laser-beam Critical Flight Zone (LCFZ) Airspace within a 10 NM radius of the airport reference point, up to and including 10,000 feet AGL, where a level of laser light is restricted to avoid flash blindness or after-image effects. Refer to Figures 2 and 3.

(c) Laser-beam Sensitive Flight Zone (LSFZ) Airspace outside the LFFZ and LCFZ where the irradiance is not to exceed 100 W/cm unless some form of mitigation is applied. The LSFZ need not necessarily be contiguous with the other flight zones. that authorities (e.g., DCAs, military) have identified that must be protected from the potential effects of laser emissions. Refer to Figures 2 and 3.

(d) Normal Flight Zones (NFZ) Airspace not defined as LFFZ, LCFZ or LSFZ. The NFZ must be protected from laser radiation capable of causing biological damage to the eye.

Figure 1: Multiple Runway LFFZ

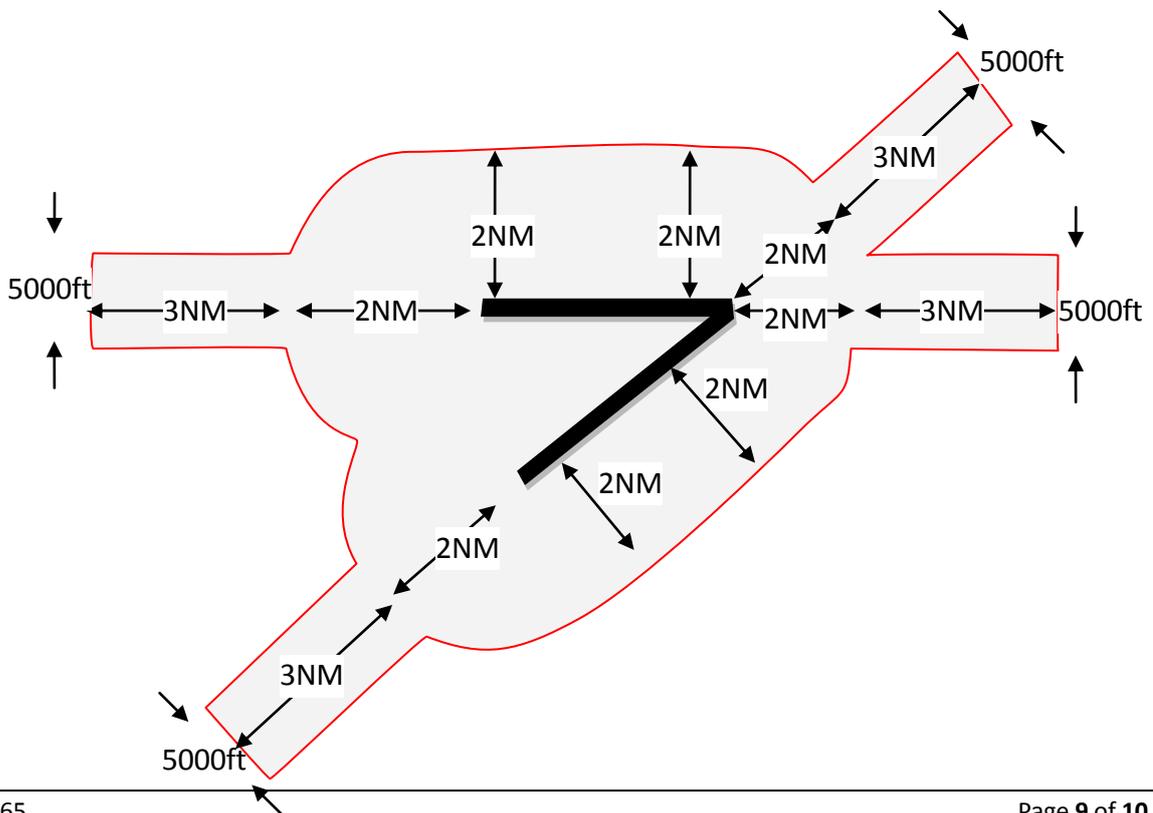


Figure 2: Multiple Runway LCFZ

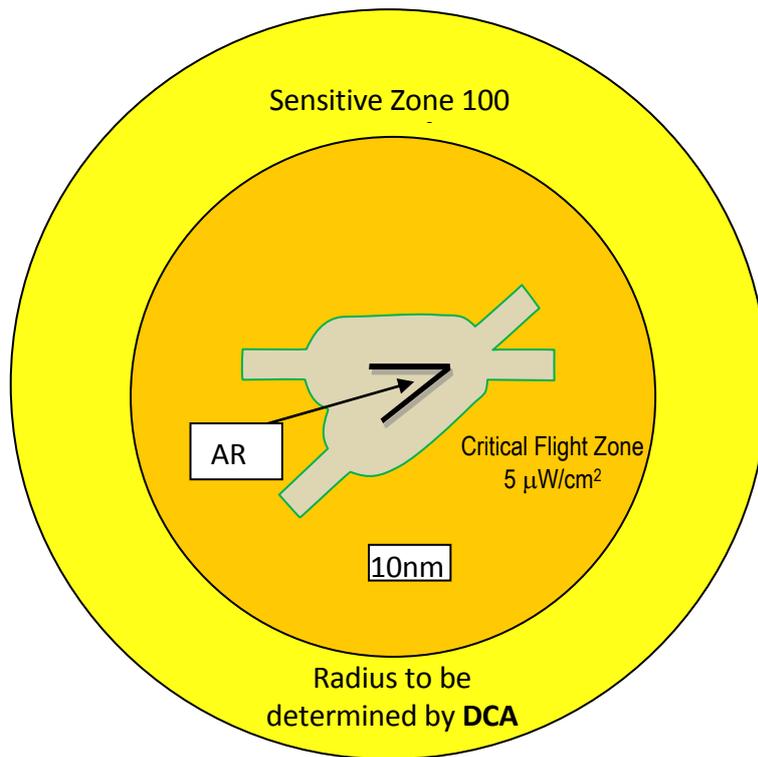


Figure 3: Maximum Irradiance Levels

