



CIVIL AVIATION ADVISORY PUBLICATION

CAAP 9

AEROPLANE LANDING AREAS

GUIDANCE INFORMATION REGARDING AUTHORIZED AERODROMES FOR AEROPLANES BELOW 5700 KG

1. PURPOSE

1.1 General

The purpose of this CAAP is to provide guidance and policy information to all operators of UAE registered light aeroplanes for the use of UAE aerodromes, which are not International or National Airports as described in the Aeronautical Information Publication (AIP). These aerodromes, once authorized and published in the AIP, may be used by aeroplanes with a maximum certified take off weight of 5700 kg or less.

1.2 Legislation

The information in this publication will ensure compliance with the UAE Civil Aviation Law and Civil Aviation Regulations and conformance with the international standards of ICAO Annex 14, Volume 1. Civil Aviation Regulation, Part III, Chapter 6 states that: “An aircraft shall not land at, or take-off from, any place unless; (c) the place is suitable for use as an aerodrome for the purposes of the landing and taking-off of aircraft in safety, having regard to all circumstances, including the prevailing weather conditions”. This regulation does not specify the method of determining which “circumstances”, other than the prevailing weather conditions, should be considered in any particular case. The guidance material set out in this CAAP indicates the minimum requirements to determine the suitability of an aerodrome, and its continued use.

1.3 CAAP Compliance

This CAAP 9 document publishes the circumstances, as stated in the above CARs. As some of these include ICAO Annex Standards and UAE legislative requirements, compliance is required wherever the word “shall” is used in this document.

1.4 Piloting

Experience has shown that, in most cases, application of these guidelines will enable a take-off or landing to be completed safely, provided that the pilot in command has sound piloting skills and displays sound airmanship.

1.5 Aerodrome operator

There is also information provided to owners or operators of these aerodromes. For aerodromes not published in the AIP, the owner should apply to the GCAA for authorization of the place for the landing and taking-off of aeroplanes.

2. STATUS OF THIS CAAP

This is the first issue of CAAP 9, AEROPLANE LANDING AREAS, dated 01 January, 2000. It will remain current until withdrawn or superseded.

3. APPLICABILITY

3.1 Aeroplane

This guidance and policy material applies to the use of authorized aerodromes as published in the AIP by pilots in command of UAE registered aeroplanes of a maximum certified take off weight of 5700 kg or less. International operations by these aircraft shall only be conducted to aerodromes, which meet this CAAP and are approved by that State.

3.2 Foreign registered and/or larger aeroplanes

Unless authorized in writing by the GCAA, aeroplanes of a foreign registry over 5700 kg shall use designated International or National (Primary or Secondary) Airports as published in the AIP. Once a specific authorization has been granted for the use of an authorized aerodrome, this CAAP will then become applicable for any UAE domestic operation by these aeroplanes.

3.3 Other aircraft

Whilst this CAAP applies to the use of aerodromes by aeroplanes, it should be noted that helicopters and recreational aircraft may also operate at authorized aerodromes.

4. CONTENTS

Para	Title	Page
1	Purpose	1

Para	Title	Page
2	Status	2
3	Applicability	2
4	Contents	2
5	References	3
6	Policy	3
7	Definitions	6
8	Minimum Physical Characteristics	6
9	Marking of Landing Areas	9
10	Lighting for Night Operations	9
11	Other Considerations	9
12	Owner Considerations	10

5. REFERENCES

This CAAP should be read in conjunction with the following references, which are available at GCAA offices and Emirate Departments of Civil Aviation;

- (a) Civil Aviation Regulations, Part III, Rules of the Air.
- (b) Aeronautical Information Publication, Part 3 - Aerodromes (AD).
- (c) ICAO Annex 14, Volume 1 – Aerodromes.

6. POLICY

6.1 General

Unless otherwise authorized by the GCAA, aeroplanes may only land and take off from designated UAE International and National (Primary and Secondary) Airports, or authorized aerodromes, which are published in the AIP or authorized in a NOTAM. To be authorized, the aerodrome shall meet the minimum physical characteristics stated in paragraph 8. The GCAA may authorize aerodromes for use after an initial inspection but assumes no responsibility for the condition of the landing area or the presence of obstructions.

6.2 Authorized operations

Aircraft engaged in the following operations may use an authorized aerodrome described in this publication;

- (a) Private operations.
- (b) Aerial work operations, with the exception that banner towing operations shall be conducted in accordance with a specific GCAA approval.
- (c) Flying training operations, with the exception that student solo flying shall be conducted in accordance with a GCAA approval of the Flying School's procedures.

- (d) Air transport operations.
- (e) Recreational aircraft operations and parachuting.

6.3 Flight rules

Aircraft operating at authorized aerodromes shall comply with Visual Flight Rules (VFR) for the appropriate class of airspace for arrival, departure and circuit operations. In all cases, the flight visibility shall not be less than 5000 metres (m). IFR operations and reduced visibility operations are not permitted.

6.4 Radio procedures

6.4.1 General. Aircraft operators and pilots are reminded that recreational aircraft may be operating at an authorized aerodrome without radio. All aircraft operating at, or arriving at, or departing from, an authorized aerodrome should maintain a very good lookout and apply good airmanship. Subject to the ATC requirements appropriate to the class of airspace in which the aircraft is operating, radio equipped aircraft arriving, departing or operating at an authorized aerodrome, shall maintain a listening watch on the appropriate published frequency for the authorized aerodrome. Radio broadcasts, which shall include aircraft callsign, aircraft type, position, intentions and proposed runway (when applicable), shall be made when;

- (a) joining the circuit;
- (b) turning final;
- (c) prior to take off;
- (d) departing the circuit;
- (e) overflying within 5 nm of any authorized aerodrome below 2000 feet (ft), subject to ATC requirements.

6.4.2 Controlled Airspace. Aircraft operating at authorized aerodromes located in controlled airspace shall, unless otherwise specified, notify the appropriate Air Traffic Service before take off and after landing.

6.4.3 Air Transport Operations. Aircraft operating at authorized aerodromes on Air Transport operations (ie; commercial) shall, unless otherwise directed, notify the appropriate Air Traffic Service before take off and after landing.

6.4.4 Alerting service. Failure to contact ATC after landing may activate ATC alerting procedures.

6.5 Conduct of operations

6.5.1 General. Aircraft operators and pilots are reminded that aircraft of different size and speed, as well as helicopters and recreational aircraft, may be operating on any runway at an authorized aerodrome. It is the responsibility of the aircraft operator and/or

pilot to determine the level of activity and operating procedures from the aerodrome operator prior to using that aerodrome.

6.5.2 Departing Circuit. An aircraft should depart the aerodrome in the direction of the circuit not below circuit height. Except for aircraft operating in controlled airspace and instructed by ATC, an aircraft should not turn against the circuit direction until on the upwind leg at least 3 nm from the aerodrome, or at least 500 ft overhead the circuit.

6.5.3 Joining Circuit. An aircraft should join the circuit remaining on the dead side whilst letting down to circuit height, or at circuit height on either the crosswind leg or the downwind leg, in the direction of the circuit for the appropriate runway. Joining the circuit on a base leg or on a straight in approach is not permitted unless at an aerodrome where there is no known traffic, or if in radio contact with that traffic.

6.5.4 Circuit Direction and Height. Subject to any ATC requirements in controlled airspace, circuit direction should be to the left for the most into wind runway and normal circuit height is recommended as 1000 ft above the aerodrome elevation.

6.6 Location of aerodromes

6.6.1 General. The GCAA shall be the final authority as to the use of an authorized aerodrome. However prior to authorising any landing area, the approval from the applicable Emirate Department of Civil Aviation (DCA) or appropriate authority (where no such DCA exists), must be granted to the owner. Aircraft operating from authorized aerodromes may be subject to DCA and ATC conditions. For GCAA authorization, the aerodrome should not be located;

- (a) within the area or in such close proximity as to create a hazard to aircraft operating from UAE designated airports, or conducting a published instrument approach, excluding the holding pattern; or
- (b) within any area where the density of aircraft movements makes it undesirable; or
- (c) where take-off or landing involving flight over a populated area creates an unnecessary hazard.

6.6.2 Populous Areas. If the proposed aerodrome is located near a city, town or populous area or any other area where noise or other environmental considerations make aeroplane operations undesirable, the use of such a landing area may be subject to municipal approval. It is the responsibility of the pilot and/or operator to ensure that operations from authorized aerodromes do not create noise or unwanted distraction.

7. DEFINITIONS

In these guidelines, unless the contrary is stated;

“**aerodrome**” means a defined area on land or water intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

“**aerodrome operator**” means the person appointed by the owner for the operation of the aerodrome and includes an employee, agent or other appointed representative.

“**closed marking**” means a white cross shape marking of 1.8 m width and 36 x 14.5 m overall dimensions that is visible from the air and placed at each end of an unserviceable landing area.

“**float plane**” means any aeroplane designed for landing or taking-off from water.

“**obstacle clearance surface**” means the airspace around the aerodrome not penetrated by any fixed obstacle.

“**runway**” means a defined rectangular area on a land aerodrome prepared for the landing or taking-off of aircraft.

“**runway strip**” means a defined area of ground including the runway intended to reduce the risk of damage to aircraft running off a runway, and to protect aircraft flying over it, during take-off or landing operations. This area must be free of tree stumps, large rocks or stones, fencing, wire and any other obstacles above ground but may include ditches or drains below ground level.

“**water alighting area**” means a suitable stretch of water for the landing or taking-off of a float plane under specific conditions.

8. MINIMUM PHYSICAL CHARACTERISTICS

8.1 General

The following summarize the basic requirements of Annex 14 physical specifications for a non instrument runway for an aeroplane with a wing span of less than 15 m and an outer main gear wheel span of less than 4.5 m. It is the responsibility of the pilot and/or operator to ascertain whether the aerodrome meets the other Annex specifications and obstacle clearance surfaces. Refer also to figures 1 and 2.

8.2 Runway

8.2.1 Width. Unless otherwise specifically approved by the GCAA, a minimum width of 18 metres shall be required for runways.

8.2.2 Length. A runway length equal to or greater than that specified in the aeroplane's Approved Flight Manual (AFM) or approved performance charts for the prevailing conditions shall be required. Both take off and landing requirements need to be considered for both directions.

8.2.3 Strip. The runway strip shall extend for 30 m on each side of the runway centreline for the length of the runway, and for 30 m beyond each end of the runway.

8.2.4 Longitudinal slope. The longitudinal slope between the runway ends shall not exceed 2%.

8.2.5 Transverse slope. The transverse slope between the extreme edges of the runway shall not exceed 2% and 3% between the extreme edges of the runway strip.

8.3 Taxiways and aprons

Taxiways and aprons should be provided to permit the safe movement of aircraft. The taxiway width shall be a minimum of 7.5 m wide.

8.4 Surface

The runway and taxiway surface shall be capable of withstanding the traffic of aeroplanes it is intended to serve.

8.4 Windsocks

A method of determining the surface wind at an aerodrome is required and the preferred method is a windsock. For night operations, an illuminated wind sock shall be required.

8.5 Obstacle clearance surfaces

The following describe the basic Annex 14 requirements for obstacle clearance surfaces for a non instrument runway. No obstacle shall infringe above those surfaces. As the GCAA does not conduct follow up inspections it remains the responsibility of the pilot and/or operator to ascertain that the aerodrome has the required obstacle clearances.

8.5.1 Approach surface. Commencing 30 m from the runway strip ends, an inclined slope of 5% (3° or 1:20) to 1600 m with 10% divergence.

8.5.2 Transitional surface. A surface along side of the runway strip that slopes upwards and outwards at 20 % to a height of 45 m.

8.5.3 Inner horizontal surface. A surface located in a horizontal plane above an aerodrome to a height of 45 m (150 ft) and a radius of 2000 m from a defined aerodrome reference point.

8.5.4 Conical surface. A surface sloping upwards at 5% and outwards from the periphery of the inner horizontal surface to a height of 35 m (106 ft) above the inner horizontal surface.

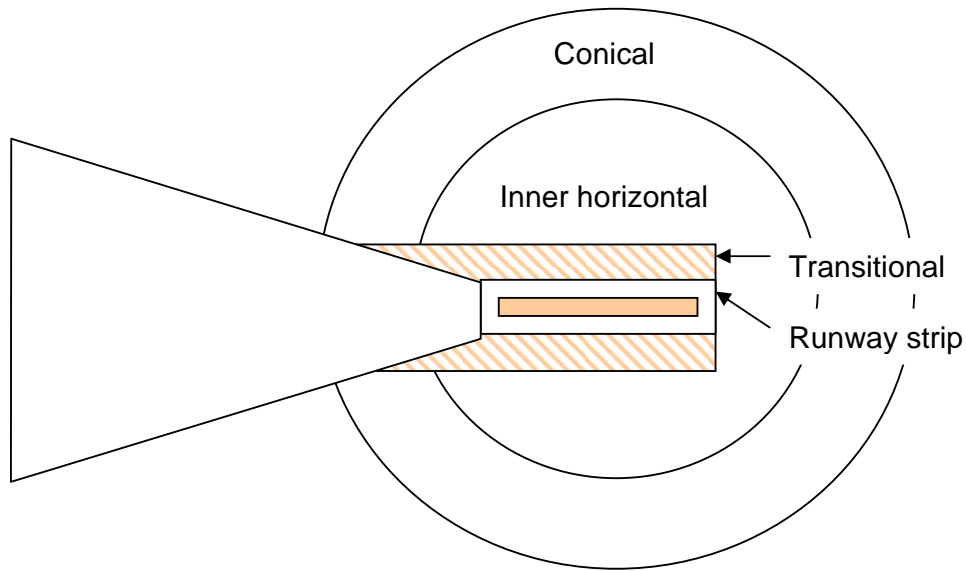


Figure 1: Authorized aerodrome basic obstacle clearance surfaces

8.6 Float plane alighting areas

For water operations, a minimum width water channel of 60 m shall be required. The depth of water over the whole water channel shall not be less than 0.3 m below the hull or floats when the aeroplane is stationary and loaded to maximum take-off weight. An additional 30 m wide area, as shown in figure 2, provides a protective buffer for the water channel but need not consist of water. Where the additional area consists of water then it shall be clear of moving objects or vessels under way. The centre line of a water channel may be curved, provided that the approach and take-off areas are calculated from the anticipated point of touchdown or lift-off. Night operations on water shall not be permitted.

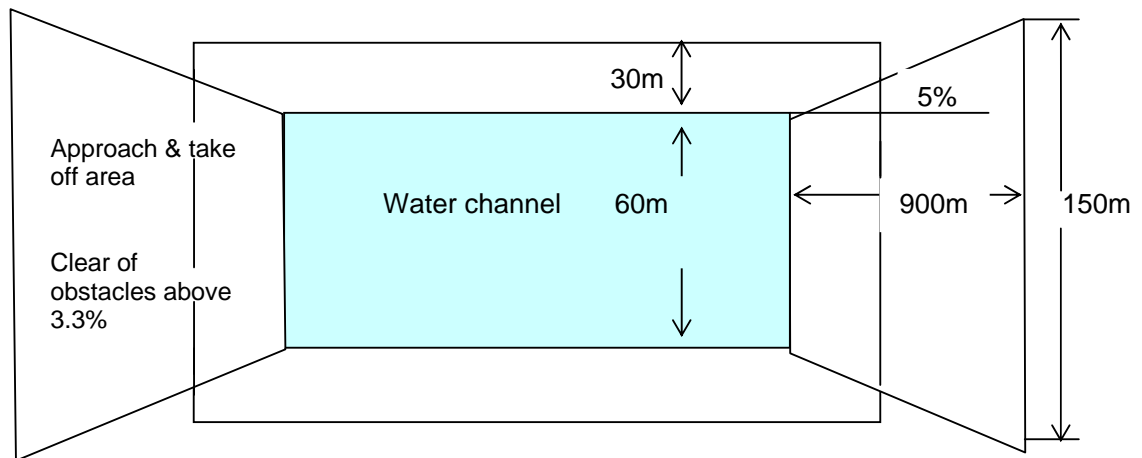


Figure 2: Authorized Water Alighting Area Dimensions - Day

9. MARKING OF RUNWAYS

Where extended operations are expected to be conducted at the aerodrome, the aerodrome operator is encouraged to provide markings similar to those found at National Airports. If markings are provided, they should follow the colours and specifications set out in ICAO Annex 14. Where runway markers are provided, which are not flush with the surface, they shall be constructed of a material that is not likely to damage an aircraft.

10. LIGHTING FOR NIGHT OPERATIONS

10.1 General. The lights should, under the weather conditions prevailing at the time of the flight, be visible from a distance of no less than 3000 m. Substitution of the recommended runway edge and threshold lights with reflectorized markers is not permitted. Reflectorized markers may be used for taxiways, manoeuvring areas and other runway lights. It should be noted that different types of reflectorized markers vary in efficiency especially in a desert environment with blowing sand. Their luminosity can be affected by a number of factors, including equipment cleanliness/layout, the position/strength of the aircraft landing light(s) and meteorological conditions; especially cross winds on final.

10.2 Windsock Lighting. A windsock shall be illuminated for night operations.

10.3 The recommended runway minimum lighting and layout is as follows;

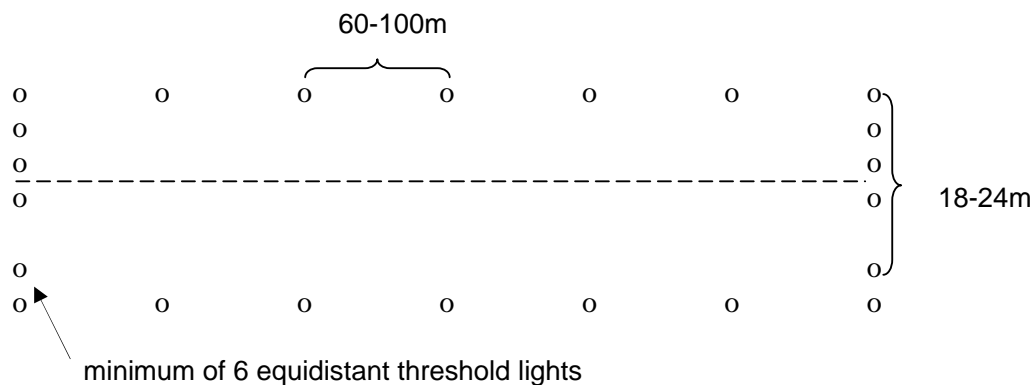


Figure 3 - Lighting for Night Operations

11. OTHER CONSIDERATIONS

11.1 Safety

A pilot should not use an aerodrome or have an aeroplane engine running unless the aeroplane is clear of all persons, animals, vehicles or other obstructions.

11.2 Suitability

A pilot shall not use an aerodrome without taking all reasonable steps to ensure the physical characteristics and dimensions are satisfactory. For aerial work and charter operations the

operator should provide evidence to the pilot on the suitability of an aerodrome prior to its use. Ultimately it is the pilot who is responsible for the safe operation of the aircraft.

11.3 Surface

The surface of an aerodrome should be assessed to determine its effect on aeroplane control and performance. For example, soft surfaces or the presence of loose sand (over 150mm) will increase take-off distances and may affect directional control, while moisture, loose sand or gravel, or any material that reduces braking effectiveness, may increase landing distance. Caution should be exercised in wet weather or after rain.

11.4 Notification

A pilot shall notify the aerodrome operator and the GCAA of any authorized aerodrome unserviceability affecting safety.

11.5 Operations manual

The appropriate information contained in this publication shall be included in the Operations Manual of any operator likely to operate into authorized aerodromes.

12. OWNER CONSIDERATIONS

12.1 Owner's approval

It should be noted that nothing in the CAR's or this CAAP shall be construed as conferring on any aircraft or person, the right to trespass or to prejudice the rights of any person in respect of any injury to persons or property caused by the operation of the aircraft. Except in an emergency, the consent of the owner/occupier is required before an aerodrome may be used. The GCAA has no objections to the continued use of authorized aerodromes provided there is an owner's approval. The AIP publishes the last known contact number for consent requests.

12.2 Owner responsibilities

The aerodrome operator shall,

- (a) at the request of the GCAA, allow an authorized Inspector access to the aerodrome and facilities.
- (b) notify the GCAA immediately if there is any change to the location, marking, lighting use and operation of the aerodrome that affects the information published in the AIP.
- (c) when aware of an unserviceability of the landing area, place closed markings on the landing area, or the effected part of the landing area.
- (d) post notices in the vicinity of the aerodrome, warning of low flying aircraft or taxiing aircraft activities, whenever it is likely that such operations may be hazardous to pedestrian or vehicular traffic.

- (e) maintain the runway and manoeuvring area, markings and wind indicators.
- (f) not permit unauthorized vehicles or persons onto areas used by aircraft.
- (g) not permit animals on the aerodrome and discourage bird activity.
- (h) not permit aircraft maintenance or refuelling operations to take place unless well away from the runway, taxiways or parking area and in a location not likely to endanger persons or property.
- (i) ensure the obstacle clearances are maintained or notify the GCAA should there be an increase or growth of obstacles.