

SOUTH AFRICAN



CIVIL AVIATION  
AUTHORITY

# Technical Guidance Material for Voluntary Registration of Aerodromes Advisory Circular

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Subject: **TECHNICAL GUIDANCE MATERIAL FOR VOLUNTARY REGISTRATION OF  
AERODROMES**

Date: **19 SEPTEMBER 2011**

## **APPLICABILITY**

This technical guidance material is applicable to aerodromes that wish to register voluntarily with the SACAA.

## **PURPOSE**

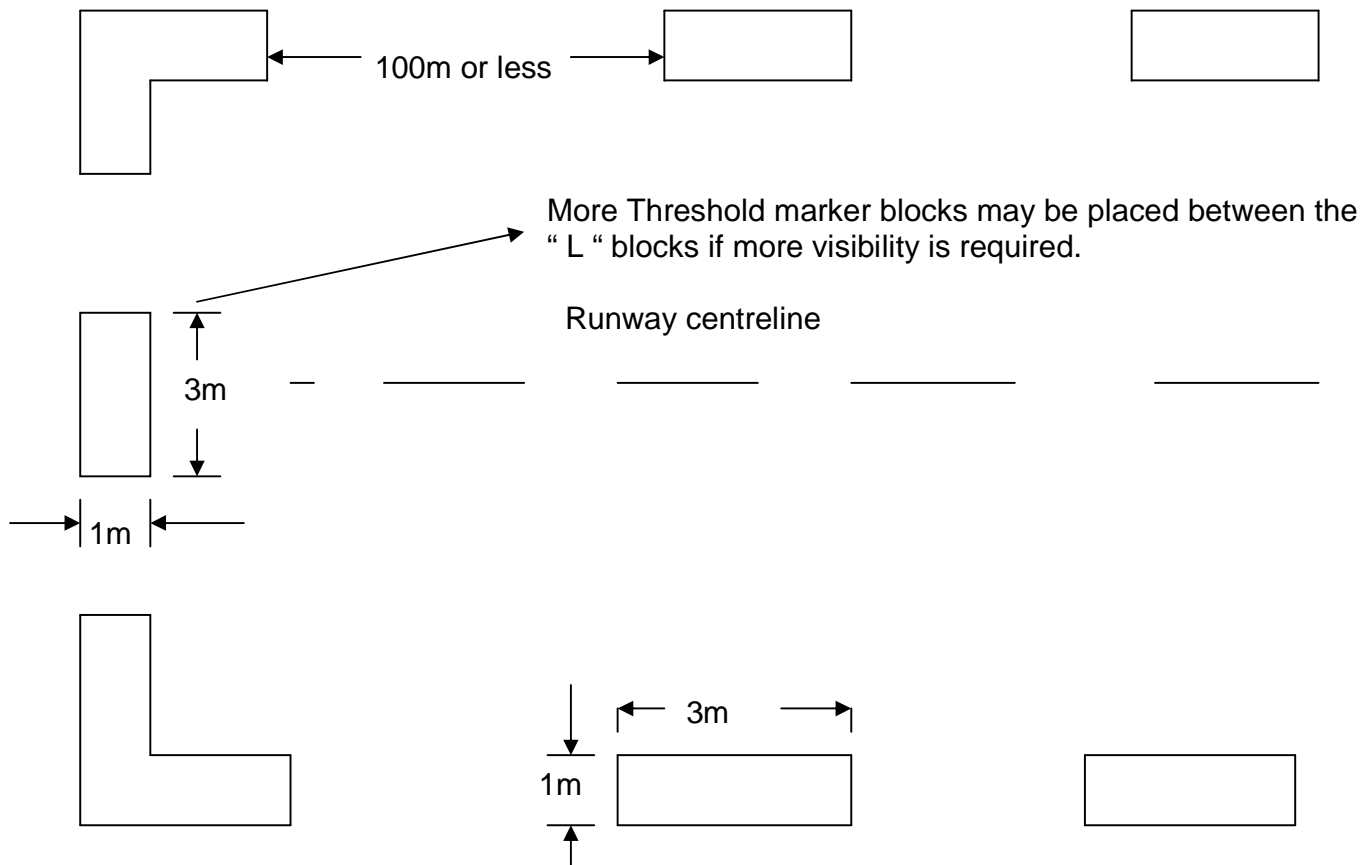
The purpose of this circular is to provide technical guidance to aerodrome operators who wish to register their aerodromes and enhance a basic level of safety standards under the duty of care at such aerodromes.

## **REQUIREMENTS**

### **1. Runways, taxiways and apron(s)**

- 1.1 The length of the runway provided, should be adequate for the aircraft type to use the runway. The runway needs to be capable of supporting the heaviest aircraft likely to use it. Manufacturer's recommendations are to be applied.
- 1.2 The width of the runway should be adequate for the aircraft type according to manufacturer's recommendations but not less than twice the width of the main landing gear of any aircraft using the runway.
- 1.3 The shoulders and surface of the runway should be maintained in a serviceable condition and be able to carry the weight of the aircraft. No furrows, loose stones, gravel, etc. should be present.
- 1.4 A strip width of 15 meters should be maintained on either side of the runway edge.

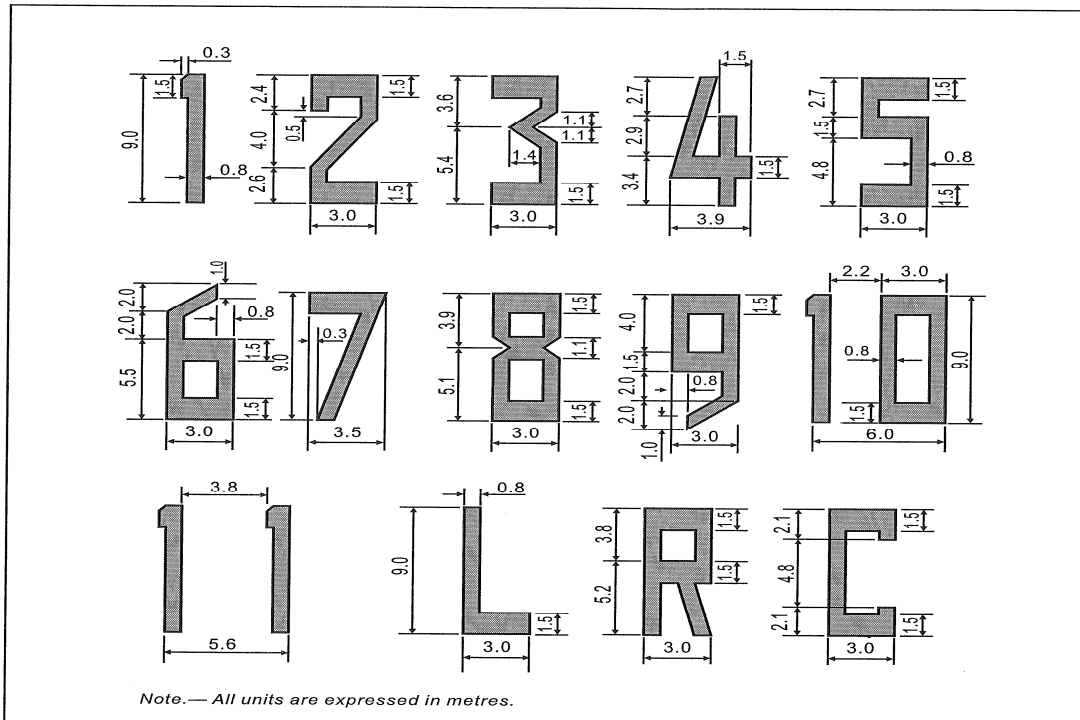
- 1.5 A strip length of 30 meters should be maintained before the threshold and beyond the runway end.
- 1.6 A wind direction indicator should be provided in a location visible from all thresholds. The sleeve should be conspicuous from the air and to make it so, the base of the mast should be ringed by a white circle 7.5 meters in diameter and 0.5 meter wide.
- 1.7 No obstacle (trees, power lines or high grounds) should be allowed to penetrate a 1:25 approach slope from the edge of the strip length and a 1:5 transverse slope measured from the outer edge of the strip width. Exceptions allowed are as follows:
  - 1.7.1 For weight shift micro lights a runway end slope of 1: 15 may be allowed; for VTOL aircraft an approach and departure slope will be determined by the SACAA
  - 1.7.2 Based on aircraft performance characteristics.
- 1.8 Runway landing area markings may be provided on a registered aerodrome. The dimensions and type shall be as described below.



*Notes: Markers should not protrude more than 25mm above runway surface and be of such strength that no damage will occur to any aircraft rolling over it.*

1.9 A runway designation marking should be provided on a paved runway.

1.10 A runway designation marking should be provided on a grass/gravel runway, and it should be placed within the strip length area (item 1.5 above) of the runway. The dimensions of the runway designation markings are as described below



1.11 A runway centerline should be provided on a paved runway.

## 2. Electrical and lighting

If night flying is to be undertaken then;

2.1 the aerodrome runway lighting and approach slope guidance may be permanent or portable but should have the light characteristics as detailed below

2.1.1 runway edge lighting should be placed along, or within 3 meters of, the outside edge of the runway with the lights spaced at intervals of  $100\text{ m} \pm 3\text{ meters}$ .

2.1.2 runway end and threshold lighting should consist of at least six lights evenly spaced at intervals of not more than 3 meters across threshold and runway end respectively.

2.1.3 all elevated light fittings should be frangible, the strength of which should be no more than what can be collapsed by hand. A length of 20 mm PVC conduit is considered a suitable mounting;

2.1.4 where lights are mounted in concrete, such concrete slabs should not protrude above the surrounding area;

2.1.5 in the case of displaced thresholds runway end/threshold lights may be installed as wing bar lights;

2.1.6 taxiways should be identified at least on one edge or on the centerline, by the use of lighting or reflective markers, as should the apron edges, if floodlighting does not adequately illuminate the apron. Reflective edge markers or centerline studs either together or separately may be used instead of taxiway edge lights;

2.1.7 Edge markers should not exceed 36 cm in height, centreline studs should not exceed 2 cm in height. Reflective edge markers should be yellow unless they are used to supplement normal taxiway edge lighting or aprons, in which case they should be blue. Centerline studs should be green.

### **3. Obstacles**

No object should be left in a position where it can pose a danger to aircraft landing, taking off or taxiing unless special circumstances warrants it after approval by the Director: environment affairs and tourism (e.g. rare trees, etc.) and additional measures are employed to clearly identify such obstacles. Obstacle penetration should be limited to the limitations as reflected in paragraph 1.7.

### **4. Fuelling**

It is generally accepted that most aerodromes in this category will not be offering fuel. In cases where fuel is being made available the following requirements should be met:

4.1 fuel should be stored and handled in accordance with SABS Codes 089 and 0131.

4.2 where fuel is stored in drums, all drums should be stored lying flat on their sides.

4.3 measures shall be implemented to ensure that fuel contamination is not transferred to any aircraft. Testing of fuel should be as per the fuel suppliers' procedures.

4.4 the standards and procedures as required by the OHSACT should apply to the fuelling area and storage facilities of fuels and lubricants.

### **5. Fencing and security**

The purpose of fencing is to keep stray animals and humans out of the aerodrome area. A suitable barrier should be provided or, in the absence thereof, a clearance procedure practiced to achieve the desired effect.

## 6. Emergency situations

The Aerodrome owner/operator should provide an emergency plan at a readily accessible and identified location in the vicinity of the aerodrome. Such a plan shall at least contain the following details to cater for the most common emergencies:

- a) Who to contact;
- b) What to do;
- c) What services will respond; and
- d) Within what time the response will be effective.

## 7. Further guidelines to safe housekeeping regarding common practice duties by the holder of a registration certificate

### 7.1 Responsible Person

7.1.1 The Responsible Person is the person held accountable for ensuring safety oversight and for maintaining the aerodrome(s) in a safe and serviceable condition and is officially identified to the Director of Civil Aviation upon application for registration;

7.2 The function of the Responsible Person is to notify the CAA immediately if:

- 7.2.1 all or part of the runway or runway strip becomes unusable due to the surface becoming too soft to permit the landing or taking off of aircraft;
- 7.2.2 the surface of the runway is so slippery that it will affect the landing or taking off of aircraft;
- 7.2.3 the runway is unusable due to cracking or loose material on the surface;
- 7.2.4 an increase in the number of birds or wildlife present on or near the aerodrome poses a danger to the safety of aircraft;
- 7.2.5 damage to the surface in the movement area affects the total runway length available;
- 7.2.6 maintenance or repair work is to be carried out on the runway, together with dates and times of the maintenance or repair periods;
- 7.2.7 there is a failure of the aerodrome lighting system, including obstacle lighting;
- 7.2.8 an obstacle is discovered within the obstacle limitation surfaces of the applicable aerodrome;
- 7.2.9 anything else occurs that affects the safety of aircraft using the aerodrome.
- 7.2.10 to inform the CAA of any change in status of the Responsible Person or his/her designation.

## **8. Access to Registered aerodromes**

- 8.1 The Responsible Person, shall exercise control over entry into the area used for loading and unloading of aircraft during such operations.
- 8.2 The control referred to in sub-regulation (1) shall be exercised according to the procedures and criteria approved by such owner or designated person.

## **9. Safety audits**

The SACAA may conduct safety inspections in order to ensure that the aerodromes and facilities are in a satisfactory condition as required by this part and according to the following guidelines:

- 9.1 Runway inspection to ensure that no holes or obstacles are on the landing surface and that the surface is in a condition suitable for the intended aircraft operation.
- 9.2 Runway is clear of animals and that a fence or clearance procedure is present and effective.
- 9.3 No obstacles in the strip area or in the end zone.
- 9.4 Obstacle protection surfaces are clear of new obstacles.
- 9.5 Where runway lights are used, no two consecutive lights are out of service.
- 9.6 The wind direction indicator is visible and in good condition and free to rotate in wind.
- 9.7 Taxiways are clear of obstacles and holes.
- 9.8 Designated parking areas are free of debris, parking chocks or any other dangerous objects.

## **10. Category Z aerodrome register**

- 10.1 The SACAA shall maintain an online register of all registered aerodromes existing in terms of the regulations in this Part.
- 10.2 The register shall contain the following particulars:
  - 10.2.1 The full name and, if any, the trade name of the holder of the approval;
  - 10.2.1 The postal address of the holder of the approval;
  - 10.2.3 The name and the location of the aerodrome for which the approval was issued;

10.2.4 The reference number of the approval issued to the holder;

10.2.5 The date on which the approval was issued;

10.2.6 Runway(s) orientation, surface, length and width;

10.2.7 Details of services available during hours of operation.

10.2.8 Any specific information the owner wishes to publish i.e. public or private landing allowed, specific restrictions the owner wishes to impose, known obstacles etc.

#### 11. Cost:

Registration of voluntary registered aerodromes is free, but if an on site visit is required by the owner / operator, please feel free to request a quote from woodl@caa.co.za.

<b>DEVELOPED BY:</b>		
	<b>L WOOD</b>	<b>19 SEPTEMBER 2011</b>
<b>SIGNATURE OF MANAGER: AERODROME SAFETY &amp; CAT Z</b>	<b>NAME IN BLOCK LETTERS</b>	<b>DATE</b>
<b>REVIEWED &amp; VALIDATED BY:</b>		
	<b>N NKABITI</b>	<b>19 SEPTEMBER 2011</b>
<b>SIGNATURE OF SENIOR MANAGER: AERODROMES &amp; FACILITIES DEPARTMENT</b>	<b>NAME IN BLOCK LETTERS</b>	<b>DATE</b>
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<b>SIGNATURE OF GENERAL MANAGER: AIR SAFETY INFRASTRUCTURE DIVISION</b>	<b>NAME IN BLOCK LETTERS</b>	<b>DATE</b>

**END**