CIVIL AVIATION
SAFETY AUTHORITY
AUSTRALIA

Civil Aviation Advisory Publication October 2000

This publication is only advisory. It gives the preferred method for complying with the Civil Aviation Regulations.

It is not the only method, but experience has shown that if you follow this method you will comply with the Civil Aviation Regulations.

Always read this advice in conjunction with the appropriate regulations.

Contents ...

CAAP 92A-1(0)

Guidelines on aerodromes intended for small aeroplanes conducting RPT operations

The relevant regulations

- regulation 92A of CAR 1988
- also regulations 89P, 89Q, 89R, 89S, 89T, 89V and 89W of CAR 1988

Who this CAAP applies to

- Aircraft operators and pilots of aeroplanes having maximum take-off weight (MTOW) not exceeding 5700 kg conducting RPT operations;
- operators of aerodromes intended for small aeroplanes;
- Persons interested in providing professional services to aircraft or aerodrome operators.

Why this publication was written

The requirements, standards and practices of aerodromes intended for aeroplanes with maximum take-off weight not exceeding 5700 kg are specified in CAR 92A, CAO 82.3 and the CASA document titled “Rules and Practices for Aerodromes”.

The purpose of this publication is to put all the salient features of the requirements, standards and practices of aerodromes, intended for small aeroplanes conducting RPT operations, together in an easy to follow format.

Guidelines on aeroplane landing areas, intended only for private, aerial work or charter operations, are provided in a separate publication numbered: CAAP 92-1.

Status of this CAAP

This is the first issue of CAAP 92A-1

For further information

Contact the CASA office closest to you.

1. The rules

1.1 Under regulation 92A, an aircraft operator may conduct regular public transport (RPT) operations from an unlicensed aerodrome if the aeroplane has a maximum carrying capacity for that operation that does not exceed 30 seats or 3,400 kg, subject to the aerodrome meeting a number of specified requirements. .

1.2 The specified aerodrome requirements are that the following facilities have to be to a standard of a licensed aerodrome:

- the physical characteristics;
- marking of the movement area;
- signals and signal area;
- wind direction indicator and its illumination;
- lighting of the movement area, and
- if full details of the aerodrome are published in the Aeronautical Information Publication AIP-ERSA, the appointment of a reporting officer.

1.3 Civil Aviation Order CAO 82.3 provides that aircraft operators may conduct RPT operations with aeroplanes having MTOW of not more than 5700 kg from aerodromes which do not fully meet the physical dimensions or obstacle limitation surfaces standards of that of a licensed aerodrome, subject to certain compensating attributes.

Note: For ease of reference, an aeroplane with MTOW of not more than 5700 kg is termed a "small aeroplane".

1.4 The technical specifications and physical dimensions of licensed aerodromes, including: runway and runway strip, obstacle limitation surfaces, marking, signals and signal area, wind direction indicator and its illumination and lighting are specified in the CASA Aerodrome Standards document, titled: "Rules and Practices for Aerodromes (RPA)".

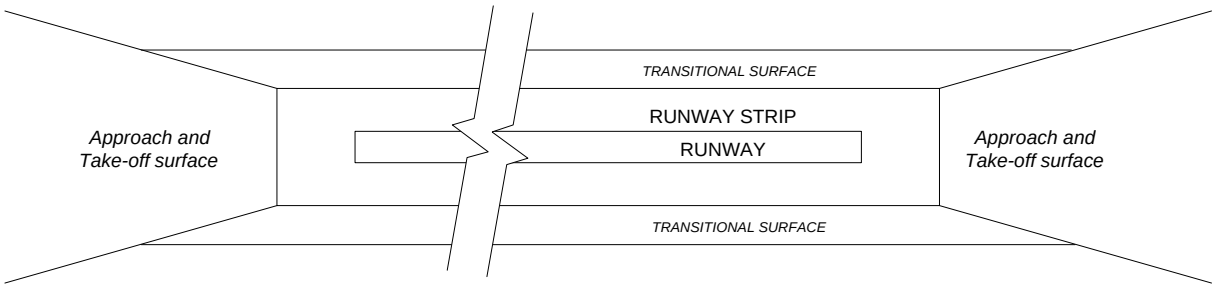
1.5 This Advisory Publication sets out in a comprehensive format, the requirements, standards and recommended practices for an aerodrome at which RPT operations may be conducted by small aeroplanes. Where appropriate, illustrations are provided to enhance understanding of the subject matter.

2. Physical dimension and obstacle limitation surfaces

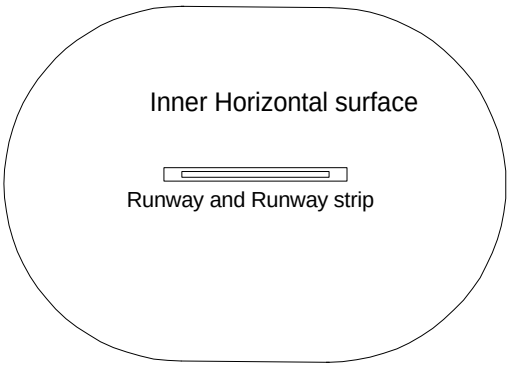
2.1 The required physical dimensions and obstacle limitation surfaces (OLS) are set out below. These are requirements for a non-instrument runway.

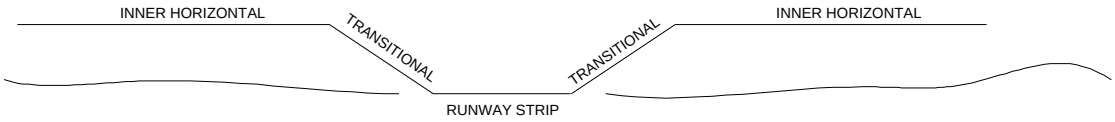
Standards for physical dimensions and obstacle limitation surfaces.

RUNWAY AND OBSTACLE SURFACES	Aeroplanes 3500 kg or more by day. All aeroplanes by night	Aeroplanes not exceeding 3500 kg by day
Runway and strip		
Runway width	18m	15m
Runway strip width - graded	80m	60m
Runway longitudinal slope	2%	2%
Runway transverse slope	2.5%	2.5%
Runway strip transverse slope	2.5%	2.5%
Approach and take-off surfaces		
Length of inner edge	80m	60m
Distance of inner edge before threshold	60m	30m
Divergence, each side	10%	10%
Length of surface	2500m	1600m
Slope	4%	5%
Transitional surface		
Slope (to 45m in height)	20%	20%



Inner horizontal surface		
Height	45m	45m
Radius from runway strip	2500m	2000m





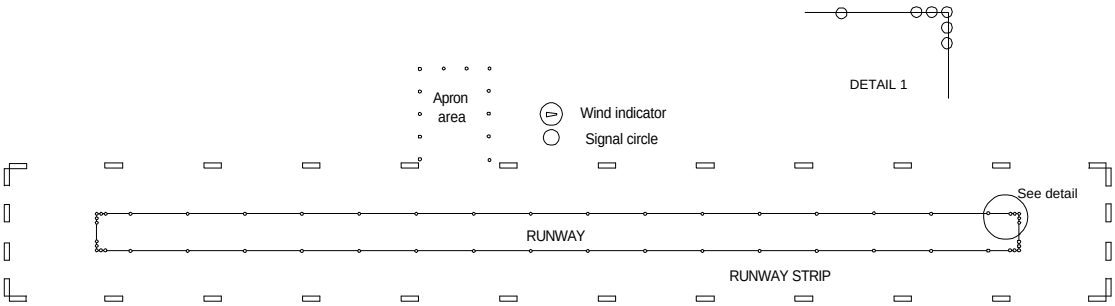
OLS Cross Section

2.2 Obstacles. Where an aeroplane operation is affected by the presence of obstacles, the matter needs to be brought to the attention of the relevant CASA office, which will determine obstacle marking and lighting requirements and any operational limitations.

2.3 Runway length. The runway length requirement varies depending on aircraft type and local geography. It is necessary to ensure that the runway length provided is adequate for the most demanding aeroplane (not necessarily operating to maximum take-off weight) that the aerodrome is intended to serve.

3. Aerodrome markings

3.1 The standard requires that aerodrome markings or markers be provided. Sealed surfaces are normally marked by paint markings and unsealed surfaces by markers.



3.2 For a sealed runway, the standard requires the runway thresholds to be painted. Runway side stripes are

only required if there is a lack of contrast between the runway surface and the surrounding area.

3.3 For an unsealed runway, the standard requires the runway to be marked, except that runway markers may be omitted if the full width of the runway strip is maintained suitable for aeroplane operations and the runway strip is marked. Where the runway is not provided with edge markers, the threshold locations need to be marked by markers or paint markings, in the shape of a U. The runway is marked by using white cones.

3.4 For both sealed and unsealed runways, the runway strip should also be marked by using cones, gable markers, tyres, or 200 litre drums cut in half along their length and placed with the open side down, or something similar. These runway strip markers should be white in colour.

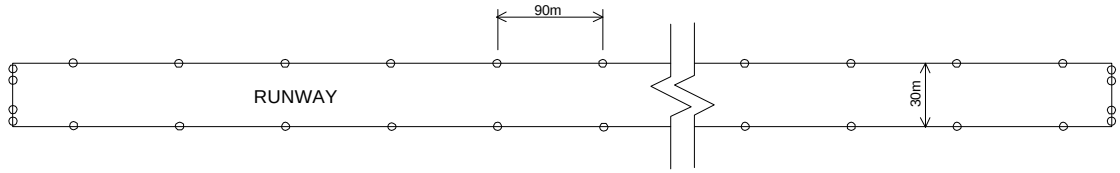
Note: Runway cone markers should have a 400mm base diameter and be 300mm in height. Runway strip cone markers should have a 750mm base diameter and be 500mm in height. Gable markers should be 3000 mm in length.

3.5 Cone or similar size markers need to be spaced not more than 90m apart. Gable or similar size markers need to be spaced not more than 180m apart.

4. Aerodrome lighting

4.1 Where a runway is intended for night operations, the standard requires the runway to be provided with runway edge lighting, spaced laterally at 30m apart, and longitudinally at approximately 90m apart.

4.2 Where there is no permanent electricity supply, portable solar charged battery lights of white colour may be used.



5. Wind direction indicator

5.1 The standard requires a wind direction indicator to be a tapering fabric sleeve (wind sock), 3.65m long and white in colour. It needs to be located such that it is clearly visible from the air. It also should be located clear of the 1:5 (20%) transitional surface.

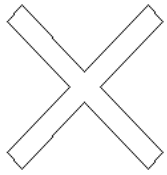
5.2 If the aerodrome is intended for night operations, the standard requires the wind direction indicator to be provided with illumination.

5.3 To enhance sighting of the wind direction indicator, the standard requires it to be in the centre of a circular area 15m in diameter, appropriately blackened or provided with a contrasting colour, and bounded by 15 equally spaced white markers.

6. Sign and Signal area

6.1 The standard requires a signal circle, consisting of a blackened or contrasting colour circular area of 9m in diameter marked by 6 equally spaced white markers, to be provided near the wind direction indicator for the purpose of displaying ground signals to pilots.

6.2 Marking of unserviceability of aerodrome. A white cross with each arm 6m in length and 0.9m in width is to be displayed on the signal circle when the aerodrome is closed to aircraft operations.



Total Unserviceability

7. Runway and runway strip conditions

7.1 The surface of the runway and runway strip need to be maintained to minimise adverse effects on aeroplane operations, as follows:

Surface	Runway	Runway strip
Sealed surface	after compaction, the surface is to be swept clean of loose stones	N/A
Height of grass		
sparse	450mm	600mm
medium	300mm	450mm
dense	150mm	300mm
Size of loose stones		
isolated stones	25mm	50mm
overall deep layer of stone	50mm	75mm
Surface cracks	40mm	75mm
Surface roughness*	65 km/h	75 km/h

* The surface roughness can be checked by driving a stiffly sprung vehicle such as a medium size utility or unladen truck at the speed specified. If it is uncomfortable, then the surface needs to be graded and levelled.

8. Aerodrome serviceability reporting

8.1 If the aerodrome is not provided with an Airservices Australia NOTAM service, the AOC holder needs to establish, in concert with the aerodrome operator, a reporting system such that the pilot can be notified of any changes to the aerodrome serviceability status, preferably before embarking on the journey.

8.2 The aerodrome operator has a duty of care to provide information that is as accurate as possible. This would require physical inspection of the aerodrome, ideally before the departure of the airline's aeroplane from its base aerodrome, but always before the arrival of the aeroplane. To maintain the accuracy of the aerodrome serviceability status, it is essential that the aerodrome be inspected after strong wind or rain. The information provided should include:

- runway surface condition: dry, wet, soft, or slippery;
- runway strip condition: any obstruction, undue roughness, visibility of markers;
- wind direction indicator: if torn or obstructed;
- approach and take-off areas: if there are objects close to or above the obstacle surfaces;
- other hazardous condition or object known to the aerodrome operator (e.g. animal or bird hazard).

8.3 If not published in AIP-ERSA the AOC holder's Operations Manual should indicate clearly the aerodrome operator's contact details for serviceability status reports.

Note: It is important that the person performing the inspection and reporting duties has a working knowledge of the aerodrome safety requirements and understands clearly his or her responsibilities.

8. 4 For unsealed landing areas, serviceability is often affected by rain. Where the aerodrome is deemed too wet for aeroplane operations, the reporting officer needs to display the unserviceability signal, and notify the airlines accordingly. When in doubt, always err on the side of safety.

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