

# AD 1 AERODROMES/HELIPORTS - INTRODUCTION

## AD 1.1 AERODROME AVAILABILITY

### 1 INTRODUCTION

1.1 This section contains information on all aerodromes which are available for international and domestic aircraft operations. Section AD 1 describes the use of aerodromes and the clearance formalities involved. Section AD 2 contains information on the physical characteristics of aerodromes available for international and domestic operations.

As there are no heliports, section AD 3 has been omitted.

### 1.2 AERODROMES ADMINISTRATION

1.2.1 The administration of the civil aerodromes is the responsibility of the Civil Aviation Authority of Singapore.

#### 1.2.2 REGULATIONS CONCERNING AIRPORT USE

1.2.2.1 Standard conditions applicable to the landing, parking or storage of aircraft on aerodromes under the control of the Civil Aviation Authority of Singapore are as follows:

- a) The fees and charges for the landing, parking or housing of aircraft shall be those prescribed in section GEN 4.
- b) The Director-General of Civil Aviation shall have a lien on the aircraft, its parts and accessories, for such fees and charges as aforesaid.
- c) If payment of such fees and charges is not made to the Director-General of Civil Aviation within fourteen days after a letter demanding payment thereof has been sent by post addressed to the registered owner of the aircraft, the Director-General of Civil Aviation shall be entitled to sell, remove, destroy or otherwise dispose of the aircraft, and of its parts and accessories, and to apply the proceeds from so doing to the payment of such fees and charges.
- d) Neither the Director-General of Civil Aviation nor any servant or agent of the Government shall be liable for loss of or damage to the aircraft, its parts or accessories or any property contained in the aircraft, howsoever such loss or damage may arise, occurring while the aircraft is on any of the aerodromes under the control of CAAS or is in the course of landing or taking-off at any such aerodrome, or of being removed or dealt with elsewhere.

#### 1.2.3 LANDINGS MADE ELSEWHERE OTHER THAN AT ALTERNATE AIRPORTS

1.2.3.1 If a landing is made elsewhere other than at an international airport or a designated alternate airport, the pilot-in-command shall report the landing as soon as practicable to the health, customs and immigration authorities at the international airport at which the landing was scheduled to take place. This notification may be made through any available communication link.

1.2.3.2 The pilot-in-command shall be responsible for ensuring that:

- a) If pratique has not been granted to the aircraft at the previous landing, contact between other persons on the one hand and the passengers and crew on the other is avoided;
- b) That cargo, baggage and mail are not removed from the aircraft except as provided below;
- c) Any foodstuffs of overseas origin, of any plant material is not removed from the aircraft except where local food is unobtainable. All food refuse including peelings, cores, stones of fruit, etc., must be collected and returned to the galley refuse container, the contents of which should not be removed from the aircraft except for hygiene reasons, in which case they must be destroyed by burning or deep burial.

#### 1.2.4 TRAFFIC OF PERSONS AND VEHICLES ON AERODROMES

##### 1.2.4.1 Demarcation of Zones

1.2.4.1.1 The grounds of each aerodrome are divided as follows:

- a) a public zone comprising the part of the aerodrome open to public;
- b) a security area comprising the rest of the aerodrome.

##### 1.2.4.2 Movement of Persons

1.2.4.2.1 Access to the security area is authorised only under conditions prescribed by CAAS.

1.2.4.2.2 The customs, police and health inspection offices and the premises assigned to transit traffic are normally accessible only to passengers, to staff of the public authorities and airlines and to authorised persons in pursuit of their duty.

1.2.4.2.3 The movement of persons having access to the security area is subject to the special rules laid down by CAAS.

##### 1.2.4.3 Movement of Vehicles

1.2.4.3.1 The movement of vehicles in the security area is strictly limited to specially approved vehicles driven by authorised persons.

1.2.4.3.2 Drivers of vehicles, of whatever type, driving within the confines of the aerodrome, must respect the direction of the traffic signs and the posted speed limits and generally comply with the provisions of the Civil Aviation Authority of Singapore (Aerodrome) Regulations and with instructions given by the competent authorities.

#### 1.2.4.4 Policing

1.2.4.4.1 Care and protection of aircraft, vehicles, equipment and goods for which the aerodrome facilities are used are not the responsibility of the State or any concessionaire who cannot be responsible for loss or damage which is not incurred through action by them or their agents.

### 1.3 CONDITIONS OF AVAILABILITY

1.3.1 Aerodromes marked as military are not available for public use unless prior permission has been obtained.

## 2 APPLICABLE ICAO DOCUMENTS

2.1 ICAO Standards and Recommended Practices are applied in accordance with Annex 14.

## 3 CIVIL USE OF MILITARY AIR BASES

### 3.1 Conditions of Use

3.1.1 Military aerodromes may be used by civil aircraft:

- a) at any time in genuine emergency requiring immediate landing at the nearest aerodrome;
- b) on agreed scheduled services;
- c) at other times with the permission of the authority responsible for the aerodrome, obtained prior to taking off for the aerodrome.

3.2 Civil aircraft using military aerodromes are subject to landing, housing and parking appropriate. Captains of aircraft are to report to ATC after landing and prior to taking off.

3.3 No responsibility will be undertaken for the provision of fuel oil, maintenance or other facilities except in cases of distress or exceptional circumstances. Pilots may make their own arrangements with civil fuel agents to refuel their civil aircraft on the aerodrome, provided that they furnish adequate cover against damage or loss arising from the presence of the agent's equipment and that prior permission is obtained from the Commanding Officer of the station.

3.4 Passengers embarking from this aerodrome will also have to pay the passenger service charge, where applicable. Foreign military aircraft are normally exempted by MINDEF Singapore from the airport charges. If exemption has not been granted, charges will be levied on foreign military aircraft.

3.5 Liability will not be accepted by the controlling Authority, its servants or agents, or by any agent or servant of the Government for the loss or damage, by accident, fire, flood, tempest, explosion of any other cause, to aircraft; or for loss or damage, from whatever cause arising to goods, mail or other articles, or for loss or injury from whatever cause, arising to passengers or other persons (including pilots, engineers or other personnel of aircraft), landing at, departing from, or accommodated in or at any service aerodrome; even if such loss, damage or injury is caused by or arises from negligence on the part of the Authority's servants or agents or of any servant or agent of the Government.

3.6 The use of any apparatus such as tractors, cranes, chocks, starter trolleys, etc., belonging to or under the charge of the controlling authority by the personnel of aircraft or other persons making use of the aerodrome, will be entirely at the risk of the person using such apparatus, and no liability will be accepted for any loss, damage or injury caused by or arising from the use of any such apparatus (whether under the control or management of any servant or agent of the controlling authority of the Government or otherwise) which may result to the user thereof or to any other person or thing. The use of such apparatus will be permitted only upon the understanding that the controlling authority and the Government will be held indemnified against all claims which may result from such use. It must, further be clearly understood that the controlling authority does not in any way guarantee the safety or fitness of any such apparatus or of any equipment, petrol or oil, or similar products, supplied.

### 3.7 Production of Documents for Inspection

3.7.1 The pilot-in-command of an aircraft shall produce to any authorised person as and when requested by that person to do so, within reasonable time before the commencement or after the termination of a flight, any of the following documents:

- a) Certificate of Airworthiness;
- b) Certificate of Registration;
- c) The licences of its operating crew and of any person required under paragraph 19 of the Air Navigation Order to be the holder of such a licence;
- d) The Telecommunications Log Book in all cases which is required under the Air Navigation Order to be carried in the aircraft;
- e) Radio Station Licence;
- f) Copy of Load Sheet (Singapore registered aircraft only);
- g) Passenger Manifest showing name and place of embarkation and destination;
- h) Cargo Manifest;
- i) Copy of Certificate of Maintenance Review (Singapore registered aircraft only);
- j) Noise Certificate as required by paragraph 51 of the Air Navigation Order.

*Note: An 'authorised person' means any person authorised by the Minister either generally or in relation to a particular case or class of cases, and reference to an authorised person include references to the holder for the time being of any office designated by the Minister.*

#### 4 CAT II / III OPERATIONS AT AERODROMES

Refer to WSSS AD 2.22 paragraphs 1.1 to 1.7.

#### 5 FRICTION MEASURING DEVICE USED AND FRICTION LEVEL BELOW WHICH THE RUNWAY IS DECLARED SLIPPERY WHEN IT IS WET

##### 5.1 Responsibility

5.1.1 The Changi Airport Group (Singapore) Pte Ltd is responsible for maintaining the civil aerodromes in a satisfactory condition for flight operations.

##### 5.2 Measurement of Runway Surface Friction

5.2.1 The friction of the runway is calibrated periodically by the use of a Surface Friction Tester using self-wetting features on a clean surface at a speed of 95 km/hr. The principle employed in this case is the measurement of the force acting on the measuring wheel along the distance travelled. The equipment provides a continuous register of the mean coefficient of friction values.

5.2.2 Friction tests will be made over the usable length of the runway, by sections of one third of the length, and at approximately 3, 6, and 9 metres each side of the centreline in such manner as to produce mean values for each runway.

5.2.3 Should the friction value fall to 0.34 or less, NOTAM will be promulgated to notify the runway as liable to be slippery when wet.

5.2.4 The following table would be adopted by Changi Airport Group (Singapore) Civil Maintenance when they report the friction values tested on the runways.

Friction Value (from friction test)	Changi Airport Group's Comment on values obtained
> 0.34	Normal
≤ 0.34	May be Slippery when wet (NOTAM would be issued)

#### 6 RUNWAY SURFACE CONDITION ASSESSMENT AND REPORTING

The following information are based on the implementation of the new ICAO methodology for assessing and reporting runway surface conditions, commonly known as the ICAO Global Reporting Format (GRF). Aircraft operators should utilize the information in conjunction with the performance data provided by the aircraft manufacturer to determine if landing or take-off operations can be conducted safely and provide runway braking action special air reports (AIREP) to ATC.

##### 6.1 Assessment and Reporting

6.1.1 Runway surface conditions are assessed and reported in the ICAO GRF whenever water is present on an operational runway.

6.1.2 Runway Condition Report (RCR) is disseminated when there are significant changes in the runway surface condition.

6.1.3 The RCR contains Runway Condition Code (RWYCC) and information that describes the runway surface condition, i.e., type of contaminants, depth, coverage for each runway third. Other relevant information is reported in the situational awareness section of the RCR.

6.1.4 The RWYCC is derived from the Runway Condition Assessment Matrix (RCAM), which contains the information that is relevant to the current weather environment in Singapore.

Runway condition assessment matrix (RCAM)

Assessment criteria		Downgrade assessment criteria	
Runway condition code (RWYCC)	Runway surface description	Aeroplane deceleration or directional control observation	Pilot report of runway braking action
6	Dry	--	--

Assessment criteria		Downgrade assessment criteria	
Runway condition code (RWYCC)	Runway surface description	Aeroplane deceleration or directional control observation	Pilot report of runway braking action
5	WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth)	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	Good
3	WET ("slippery wet" runway)	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	Medium
2	STANDING WATER (more than 3 mm depth)	Braking deceleration OR directional control is between Medium and Poor.	Medium to Poor

6.1.5 The RCR is disseminated via ATIS, SNOWTAM, and Air-Ground Voice Communications.

<b>Communication Channels for RCR</b>
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Runway condition code (RWYCC)	Air-Ground Voice Communications	ATIS	SNOWTAM
6 (Dry)	Yes*	No	No**
5 (Wet)	Yes	Yes	No**
3 (Slippery Wet)	Yes	Yes	No**
2 (Standing Water more than 3 mm)	Yes	Yes	Yes

\* Upon request

\*\* Except when RWYCC 2 was previously reported

## 6.2 Dissemination of Runway Condition Report (RCR)

### 6.2.1 ATIS

6.2.1.1 The RCR is communicated in addition to the MET REPORT elements. The information is communicated for each runway third in the direction of landing/take-off.

### 6.2.2 SNOWTAM

6.2.2.1 The SNOWTAM will be promulgated whenever RWYCC 2 is reported. The assessment and reporting of runway surface conditions continue until the runway is no longer contaminated. The RCR is communicated from the lowest runway designation number.

### 6.2.3 Air-Ground Voice Communications

6.2.3.1 Only the Runway Condition Code (RWYCC) for each runway third will be communicated through the frequency. The contamination type, contamination depth, and coverage will be provided upon request by the pilot. The information is communicated for each runway third in the direction of landing/take-off.

6.2.4 Pilots are to make special air reports (AIREP) whenever worse braking action than previously reported is experienced. Otherwise, the pilots may be asked by the ATC to report their assessment of the braking performance. The terms to describe braking action are provided in the RCAM in para 6.1.4.