

For information

Legislative Panel on Economic Services

Opening of Airport during Adverse Weather Conditions

Introduction

This paper briefs Members on a review conducted by the Civil Aviation Department (CAD) on the practice of keeping the Hong Kong International Airport (HKIA) open during adverse weather conditions.

Background

2. Following the accident of an MD-11 aircraft of China Airlines on 22 August 1999, questions were raised as to whether the HKIA should be kept open during typhoons. A paper on the accident was discussed at the Panel meeting on 31 August 1999, at which the rationale for our practice was explained, among other things.

3. The CAD has recently conducted a detailed review of the subject. Our findings and conclusion are set out in the following paragraphs.

International Standard and Practices

4. Paragraph 4.1.3 of Annex 6 Part I to the Convention on International Civil Aviation (“the Convention”) provides that: “Subject to their published conditions of use¹, aerodromes and their facilities shall be kept continuously available for flight operations during their published hours of operations, irrespective of weather conditions.” Whilst an airport may be closed for reasons such as its inability to provide air traffic control (ATC) services, it should not be closed just because of adverse weather conditions.

5. We have sought information on the practice of other

¹ The “published conditions of use” usually refer to matters such as types of traffic permitted to use the aerodrome (instrument/visual flights, scheduled/non-scheduled/private flights), compliance with noise abatement procedure and payment of landing and parking charges, etc. and should not be based on weather conditions.

international airports in places affected by typhoons, such as Japan, Philippines and Taiwan. Based on the information available, none of these airports would be closed purely for weather reasons.

Airport and Air Traffic Control Operations

6. CAD is satisfied that the Airport Authority (AA) is capable of ensuring safety of airport operations during adverse weather conditions and sufficient safety procedures and precautionary measures are in place to cater for such conditions. Essential airport facilities and services such as the provision of meteorological information and rescue and fire fighting services will be adequately maintained. Furthermore, provision of adequate ATC services by CAD can be maintained, as all ATC systems, including radar, air-ground communication, navigation aids, etc., are designed to continue to function properly irrespective of the weather conditions at the HKIA. Therefore, unless there are unforeseen circumstances, the HKIA would continue to provide adequate facilities and services during adverse weather conditions.

Flight Operations

7. In accordance with paragraph 4.5.1 of Annex 6 Part I of the Convention, the pilot-in-command shall be responsible for the operation and safety of the aeroplane and for the safety of all persons on board during flight times. The role of air traffic controllers is to provide pilots with the necessary information on weather (e.g. wind and cloud) and aerodrome (e.g. runway and navigation aids) conditions.

8. In general, an aircraft is required to be operated within the approved operating limitations, such as tailwind and crosswind limitations, contained in their respective flight manuals. Such manuals have to be approved by the regulatory authority responsible for the design of the aircraft.

9. Moreover, in accordance with paragraph 4.2.7 of Annex 6 Part I of the Convention, an airline is required to establish aerodrome operating minima for each aerodrome to be used in operations. In short, "operating minima" include the minimum level of visibility or runway visual range, decision height or minimum descent height and cloud conditions. When the prevailing weather conditions at an aerodrome are poorer than those levels, a pilot should not land his aircraft there. In establishing these minima, the airline should take into account factors

including -

- (a) the type, performance and handling characteristics of the aeroplane;
- (b) the composition of the flight crew, their competence and experience;
- (c) the equipment available on the aeroplane for the purpose of navigation and/or control of the flight path during the approach to landing and the missed approach;
- (d) the means used to determine and report meteorological conditions.

10. Paragraph 4.2.7 also requires that such minima shall not be lower than any minima that may be established for such aerodrome by the authority of the place in which the aerodrome is located. In Hong Kong, CAD has set out the acceptable minima (expressed in terms of Decision Height² and Runway Visual Range) for the different categories of Instrument Landing System (ILS) approaches available at the HKIA. These acceptable minima are promulgated in an Aeronautical Information Circular.

11. In respect of local airlines, their aerodrome operating minima are vetted and approved by CAD. Foreign airlines have to satisfy their respective aviation authorities that their aerodrome operating minima are set at a level which will not affect flight safety. For those operating to the HKIA, CAD also requires them to furnish aerodrome operating minima specified for the HKIA. They must make such amendments or additions to the minima as may be required by CAD for the purpose of ensuring, among other things, the safety of aircraft when encountering adverse weather conditions at the HKIA.

12. In brief, pilots-in-command are in the best position to decide whether to land or otherwise during adverse weather conditions, based on their airline's aerodrome operating minima and their aircraft's operating limitations.

² Decision Height is the height at which a pilot has to discontinue his approach to land and initiate a missed approach if the required visual reference to continue the approach has not been established.

Consultation

13. We have consulted the AA, the three major local airlines and the Government Flying Services. All of them are against the closure of the HKIA purely because of adverse weather conditions. The airlines' view is that an aircraft commander is in the best position to decide whether or not to land or take-off.

14. The Aviation Advisory Board, which includes members from various sectors such as aviation, trading, freight forwarding, tourism and academia, also supports the retention of the practice to keep the HKIA open regardless of weather conditions, having regard to the information in paragraphs 4 to 13 above.

Conclusion

15. Our review shows that since adequate facilities and services would continue to be provided and there are sufficient safety procedures and measures to cater for the safe operation of the HKIA under adverse weather conditions, there is no reason for the HKIA to deviate from the international standard. The practice of keeping the HKIA open during adverse weather conditions should, therefore, continue while adequate facilities and services are provided. Nevertheless, in unforeseen circumstances under which adverse weather conditions may render runway conditions unsuitable for landing or take-off, CAD and AA will consider the need for closing the HKIA.

16. In line with the standards set out by the International Civil Aviation Organisation, CAD will continue to provide adequate weather and aerodrome information (e.g. wind, turbulence, visibility, cloud condition, runway condition, etc.) to pilots to assist them to decide whether or not to land or take-off.

**Civil Aviation Department
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