IFALPA
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Safety Bulletin

11POS15 9 March 2011

Operational Hazards created by fourth runway at Tokyo Haneda (RJTT)

Background

While Tokyo benefits from the services of two airports Narita (RJAA) and Haneda (RJTT), Haneda's relative proximity to downtown Tokyo has meant that demand for growth at this airport has been the greater of the two. This demand was further enhanced with the re-opening of the airport to overseas operators . Accordingly, in 2008, it was announced that capacity at Tokyo Haneda would be boosted by the construction of a fourth runway at the airport. As a result of this expansion the airport expects to increase annual movements to 407,000 (compared with 252,480 in 2010).

Naturally the ALPA Japan Aerodrome and Ground Environment (AGE) experts got involved with the project when the fourth runway was announced. However, their advice has gone unheeded by the Japan Civil Aeronautics Board with the result that the risk for on-ground and approach related incidents is significantly elevated. ALPA Japan's AGE team have identified a number of point which pilots operating into Haneda should be aware of and pay special attention to.

Airport Operations issues

Noise abatement

While the airport's proximity to the city centre has created much of the demand this proximity has also brought with it a number of operational constraints designed to reduce the noise impact on local residents.

Weather

In addition to noise abatement, flight operations at Haneda are weather dependent. Prevailing winds are northerly for about 60% of the year with the remainder featuring a southerly flow.

Traffic flow in the Fukokua FIR

The Japanese archipelago runs generally north to south and most of the domestic volume follows this direction. Japan's larger cities are located to the south of the capital and compared to those of the north, around 70% of domestic flights will depart to or arrive from the south.

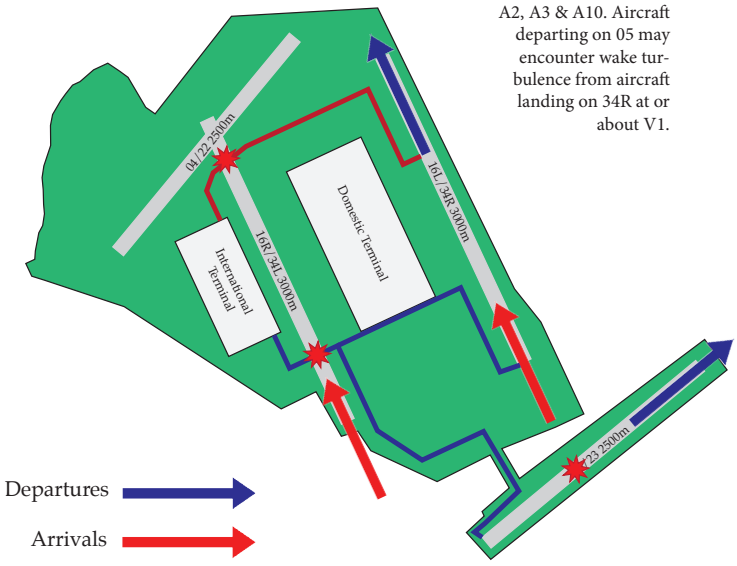
International terminal location

While the two domestic terminal buildings occupy a mid-field location space, constraints meant that the International terminal had to be located to the west of Runway 16R/34L. This means that aircraft using this terminal will be required to cross the active Runway 16R/34L in all weather conditions between 0600 and 2300 local.

Traffic distribution

The bulk of flights operating to from Haneda are on domestic "out and back" type operations nightstopping at the airport. This leads to a priority being placed on departure operations between 0600 and 0800 with arrivals taking priority from 2100 to 2300.

Traffic pattern Northerly Wind Daytime



In addition to the runway incursion threat posed by taxiing aircraft crossing 16R/34L at A2, A3 & A10. Aircraft departing on 05 may encounter wake turbulence from aircraft landing on 34R at or about V1.

Problems identified by ALPA Japan

Northerly wind operations

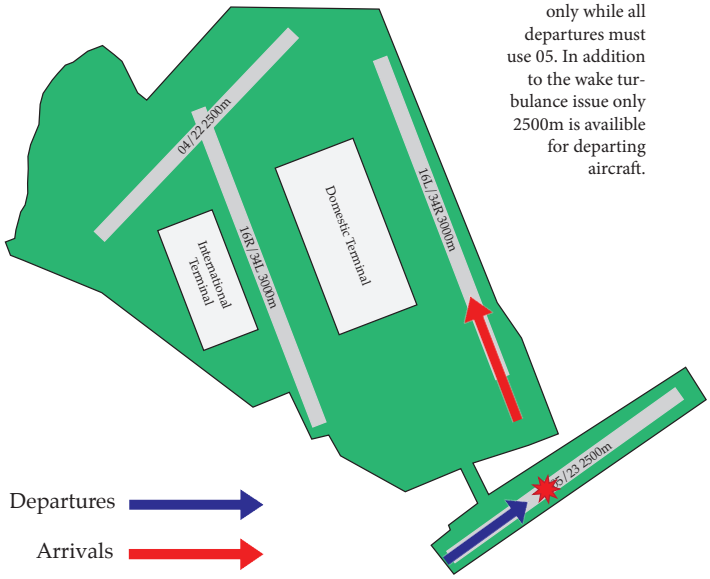
Arrivals

While aircraft inbound from the north and east can expect to land on runway 34R those en-route to the International terminal will have to cross runway 34L at a high energy point (this is contrary to IFALPA policy which says that when an airport is unable

to provide an "end around" taxiway all runway crossings should be completed at low energy points). For this reason ALPA Japan reminds crews of aircraft arriving from the south and landing on 34L to be vigilant for runway incursions by aircraft crossing the runway at both the northern and southern ends. Crews of taxiing aircraft are reminded of IFALPA's guidance for the use of external lights to improve aircraft visibility (*see 09AGEBL01*)

Crews of aircraft landing on runway 34L should also be aware of the potential for building induced turbulence on short final when strong North-easterly winds are present.

Traffic pattern Northerly Wind Night (2300 - 0600 local)



Beteeen 2300 and 0600 runway 34R is used for landings only while all departures must use 05. In addition to the wake turbulance issue only 2500m is availible for departing aircraft.

Runways 34 L&R Charted Visual Approach (CVA)

As a noise footprint reduction exercise, simultaneous Charted Visual Approaches to runway's 34L & R when weather conditions permit (ceiling >500ft MVA and Vis >5km.) may be in use. Flights inbound from the North should expect to follow the CACAO arrival to RJTK and then continue visually via the reporting points HIGHWAY and SAIL ISLAND to 34R. Meanwhile, arrivals from the south should expect to follow the KAIHO arrival to CAPE FUTTSU and then continue visually via SAIL ISLAND to 34L. As with all visual procedures, crews are responsible for traffic and terrain separation.

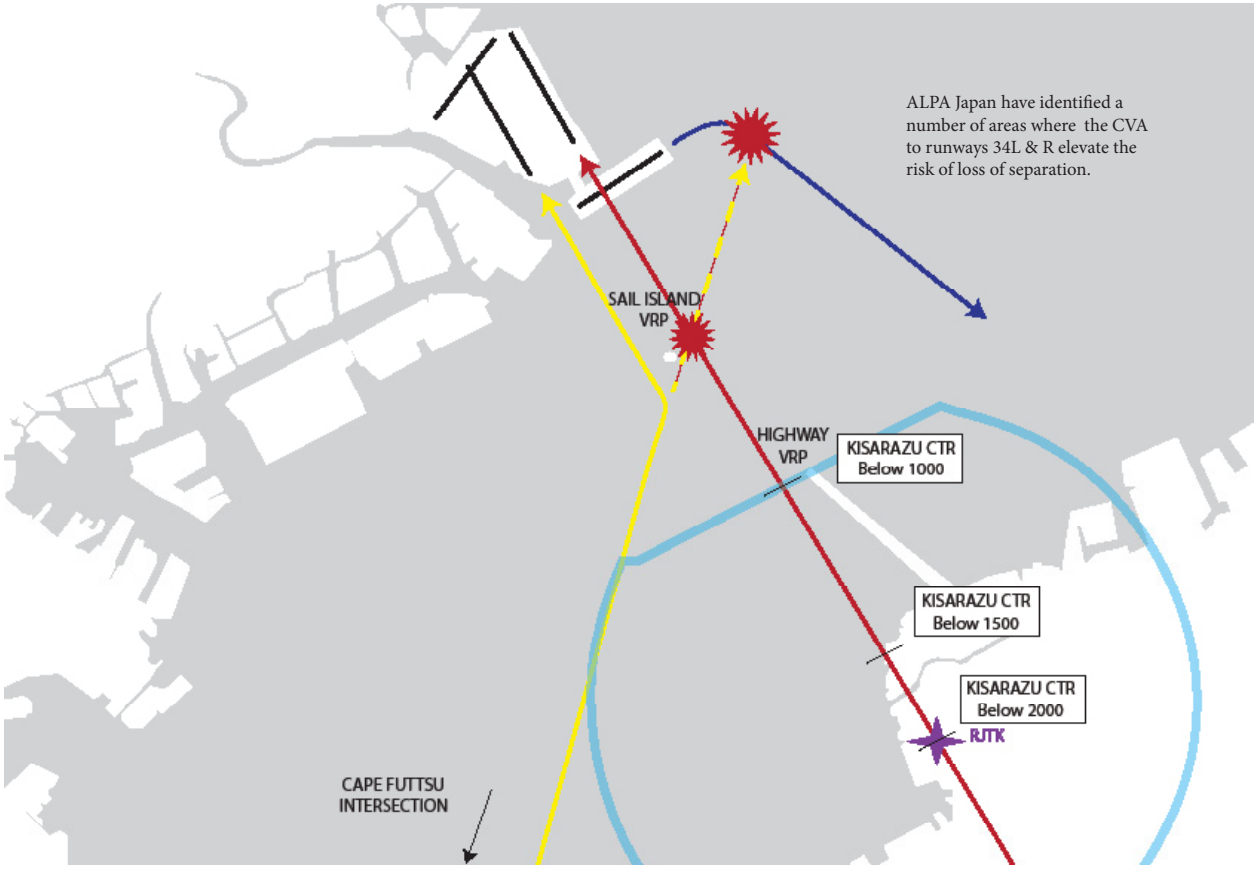
ALPA Japan have identified a number of potential hazards with this procedure:

- The turn to final approach on runway 34L requires a significant change of course at low altitude (1,500ft) increasing the likelihood of an unstable approach.

- Traffic for 34L turns to final at the same altitude and using the same VRP as traffic bound for 34R increasing the likelihood of loss of separation events.

- There is also an elevated risk of loss of separation from traffic departing on 05 by aircraft carrying out a go-around from runway 34L.

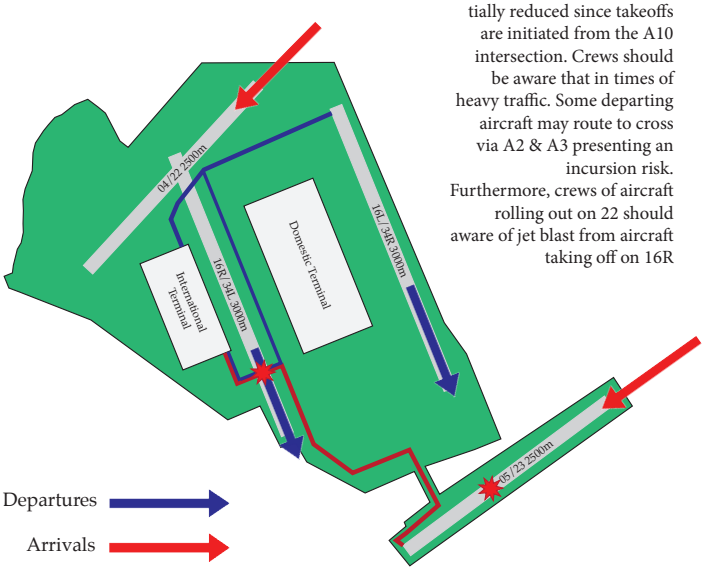
- The approach is further complicated by the need to avoid the Kisarazu CTR (RJTK) airspace.



Departures

Crews should be aware that Haneda has protocols for departure runway use which are strictly applied and should take account of this when flight planning. Only aircraft with destinations to the north and east may use runway 34R (3,000m) for departure. Aircraft bound for all other destinations must use Runway 05 (2,500m) for departure. ALPA Japan cautions pilots they might experience speed indication fluctuations at or near V1, caused by wake turbulence from aircraft landing on 34R. Crews of aircraft leaving the International terminal for departure on either runway are reminded that they will be required to cross runway 34L and should guard against the risk of inadvertent incursion. As with inbounds take note of IFALPA's use of external lights advice (*see 09AGEBL01*)

Traffic pattern Southerly Wind Daytime



While incursion risk from aircraft crossing 16R is partially reduced since takeoffs are initiated from the A10 intersection. Crews should be aware that in times of heavy traffic. Some departing aircraft may route to cross via A2 & A3 presenting an incursion risk. Furthermore, crews of aircraft rolling out on 22 should aware of jet blast from aircraft taking off on 16R

Southerly wind operations

Arrivals

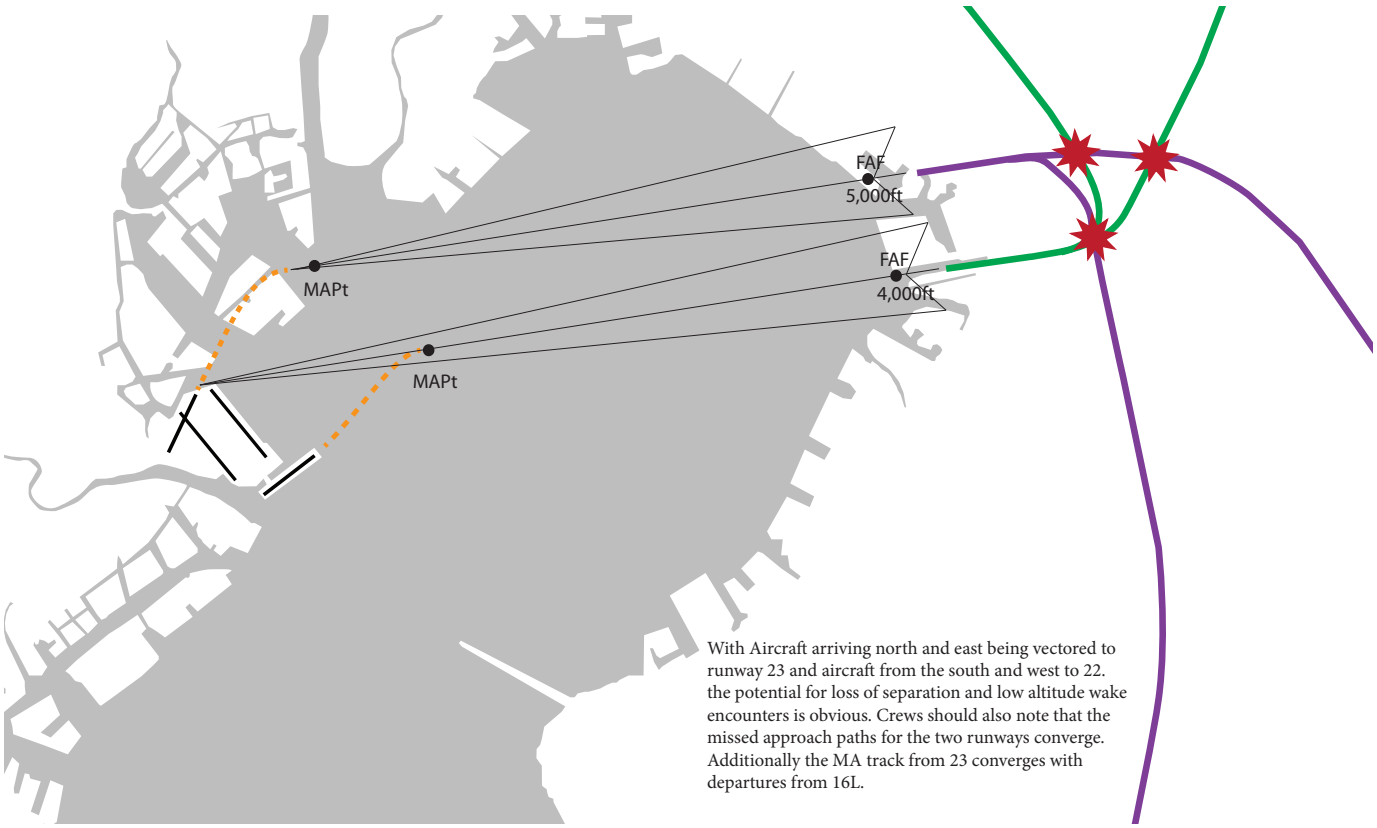
Aircraft arriving from the South and West will land using runway 22. Crews should be aware of the risk of jet blast from aircraft departing on runway 16R. Aircraft arriving from the North and East will land using runway 23. As with arrivals using 05 or 34R if taxiing to the International terminal, aircraft will have to cross runway 16R at a high energy point. Crews should exercise elevated caution to guard against the risk of runway incursion and consider IFALPA's use of external lights guidance to help mitigate the consequences of any incursion.

Arriving aircraft should also note that ILS is only available on runway 22 and therefore this is the primary instrument approach runway in southerly winds when conditions fall below minimums for the LDA approach on runway 23. This may lead to delays especially at peak arrival times (2100-2300) and should be taken into account in flight planning.

Simultaneous LDA Approach

The airport has also instituted the use of simultaneous localizer directional aid (LDA) on runways 22 and 23. The Localisers are offset 55° on runway 22 and 47° on runway 23. ALPA Japan have identified a number of hazards with this procedure and advises crew to take special note of the following problems:

- Because of the airport runway allocation procedure, aircraft arriving from the North & East (landing rwy 23 will have to cross the track with aircraft inbound from the South & West (landing 22) after the Initial Approach Fix (IAF) with only 1,000ft of vertical separation and vice versa.



With Aircraft arriving north and east being vectored to runway 23 and aircraft from the south and west to 22. the potential for loss of separation and low altitude wake encounters is obvious. Crews should also note that the missed approach paths for the two runways converge. Additionally the MA track from 23 converges with departures from 16L.

- To aid runway identification a number of visual aids are depicted as being available on the approach chart but in reality these are difficult, if not impossible, to identify from the air.
- Aircraft overshooting the turn to 23 will lose lateral separation from those on track for 22. Likewise aircraft undershooting the turn to 22 will converge with the track for 23.
- The missed approach tracks for the two runways converge
- The missed approach track for 23 crosses the departure track for 16L
- There is no vertical guidance (for example an offset PAPI) on either runway – it should also be noted that if in existence any visual guidance would be hard to discern on afternoon into sun approaches.

Departures

Aircraft with destinations to the south or west are required to use runway 16R but must use the A10 intersection departure, which reduces the available runway to 2,500m. To ease taxiway congestion ATC may detour aircraft outbound from the International terminal via 16L to cross 16R at the departure end. Accordingly, crews of aircraft departing on 16R should be extra vigilant for the possibility of incursion. Likewise crews bound for 16L routed in this manner should guard against runway incursion and consider IFALPA's use of external lights guidance (*see 09AGEBL01*). Crews departing via 16R should also be aware of the incursion risk from aircraft recently landed on 23 en-route to the International terminal.

Additional factors

The AIP Japan says that when the letter B is used as the second letter after a number it is referred phonetically as "Brunch" (Example taxiway B5B would be called Bravo 5 Brunch). The use of a non-standard aviation phrases creates the potential for confusion especially in a multi linguistic environment and this, in turn, elevates the risk of misunderstanding, which could lead to incidents or accidents. The advice from ALPA Japan is that crews should listen very carefully to ATC instructions that may include non-standard phrasing.

Between 2300 and 0600 when southerly winds prevail the ILS on runway 22 is NOT availible. All landing must be carried out using the LDA approach on runway 23 if conditions do not allow this then aircraft must divert to the alternate.