

HONG KONG (HKG/VHHH)

Elevation 28ft

CATEGORY B

No AV brief required.

GENERAL**Threat Based Briefing Topics****CFIT**

- The airport for Hong Kong is built on reclaimed land to the N of Lantau. It is some 11nm W of Hong Kong Island. On Lantau Island there is high ground which begins to rise 1nm S of the airport reaching nearly 3,100ft asl at 3nm S and nearly 2,600ft asl at 3.5nm SE
- The peak on Hong Kong Island reaches nearly 2,000ft asl and is 12nm E
- 12nm NE and only 1.5nm N of the extended centreline to Rwy 25R is a peak to nearly 3,300ft asl
- The airport for Macau is some 20nm SW

Loss of Control

- Due to the proximity of the hilly terrain of Lantau Island to the S and E, significant low level windshear and moderate to severe turbulence can be expected when winds blow from E through to S to SW at about 15 kt or more. See HKG weather section for detailed information.

ROUTE

- Driftdown/Depressurisation procedures apply on routes to HKG.

ARRIVAL**Initial Approach**

- Ensure HKG ATC contacted at appropriate time as detailed on Operational Flight Plan. Contact Hong Kong Radar 3 minutes prior SIERA; ATC should give STAR clearance. SIERA is the boundary and just to the South West of Macau. If there are significant inbound delays a hold may be assigned at CANTO.
- Guangzhou ATC will often require you to descend early, sometimes with direct routings to cross SIERA as low as FL190. Do not delay the descent/arrival briefing based on FMS predicted TOD point.
- Landing on Rwy 07L is preferable when landing Easterly and vacating at RET A8 or A9 will minimise taxi in, however if landing beyond A7 inform approach so they can adjust spacing
- Rwy 25R will be given when landing Westerly (Rwy 25L is used for cargo operators).
- D-ATIS is available for HKG.

Crew Reports

- Map shift errors on B747-400 aircraft have been reported

Approach

- Be alert to the possibility of an ATC descent to a very low platform altitude on the approach to Rwy 07L and plan/brief aircraft configuration appropriately
- Tailwinds on short finals are very common. Pre-brief the latest acceptable touchdown point on the runway.
- There is significant terrain on the approach to Rwy 25 and the missed approach for Rwy 07. The missed approach, following an approach towards Rwy 07R, involves climbing straight ahead initially and then turning right, over the water, between the high ground on Lantau Island and the high ground on Hong Kong Island. Accurate tracking and flying is essential.
- During the winter monsoon, northerly wind of 25kt or more may produce WINDSHEAR and severe turbulence during a missed approach
- Reduced Runway Separation Minima procedures are in place. In favourable meteorological conditions crews may expect to receive clearance to land before the preceding aircraft has vacated or departing aircraft has left the runway.

Diversion Preference

1. Macau, if approach feasible
2. Shenzhen
3. Guangzhou

A380 Operations

- Note that Macao and Shenzhen are not available for A380 operations. In this case, Guangzhou (ZGGG), in mainland China about 100nm north of VHHH will be planned as the fuel alternate. Passenger dispersion facilities are limited. If a diversion is likely, plan to load sufficient fuel for Taipei (RCTP) first and then Clark/Angeles City (RPLC) in the Philippines. The OFP will provide the definitive commercial priority of alternates in the normal way (C1, C2 etc).
- From time to time these alternates may not be available for A380 operations
- In the event of a typhoon warning in force at the planned arrival time the flight will be delayed at LHR and operate the following day.

Alternate and Diversion Airports

- Macau, Shenzhen and Guangzhou are in the local area. Kaohsiung, Taipei or Taiwan provide further alternates along with Manila, which is the most distant.

Diversion Airports

MACAU	MFM/MMC	021 nm/242°T	CAT B
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- Macau is very close and has good handling but limited apron space so may become congested fairly rapidly in the event of mass diversions. Fuel approved. Not suitable for A380.
- For northerly arrivals, aircraft are controlled by Hong Kong for the initial approach. Rwy 34 is fully Cat 2 equipped and provides the only AWOPS capability in the area.
- Shenzhen controls intermediate approach to Rwy 16 with cleared altitudes given in metres. Rwy 16 has an offset localiser only approach which is not recommended unless in good weather conditions.

Diversion Airports

SHENZHEN	SZX/ZGSZ	021 nm/344°T	CAT A
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- Located 30nm to the NW. Little traffic and reputed to be acceptable from a handling viewpoint. Straightforward approaches to Rwy 15/33. Fuel is approved and more apron capacity than Macau. Not suitable for A380.

Diversion Airports

GUANGZHOU	CAN/ZGGG	074 nm/344°T	CAT A
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- New airport opened August 2004. Good surface links to Hong Kong for passenger transfer.

Diversion Airports

KAOHSIUNG	KHH/RCKH	359 nm/087°T	CAT A
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- Located on the southern end of Taiwan. Can become congested at times of mass diversion. Immigration difficulties may be experienced.

Diversion Airports

TAIPEI	TPE/RCTP	436 nm/068°T	CAT A
ANGELES CITY	CRK/RPLC	572 nm/138°T	CAT A
BEIJING	PEK/ZBAA	1077 nm/007°T	CAT A
SHANGHAI, Pudong	PVG/ZSPD	679 nm/039°T	CAT A

GROUND

- B747/B777 parking stands normally used are between E15-E19
- APU ban for aircraft parking at frontal parking stands
 - The APU is to be shut down 5 mins after chocks on and not started in excess of 25 mins (60 mins A380) before STD

- In the event of Red Lightning warnings, refuelling and pushbacks are suspended (see Lido AOI 11)

A380 Operations

- A380 stands are N60/62/64, E15 and S25
- If vacating from Rwy 07L at A8 it is possible to be parked at the N gates in less than 5 minutes; this will require running engines on the gate to complete 5 mins at idle thrust
- After disembarking aircraft will be tugged off; complete full shutdown as departure is not for approx. 9hrs
- Stands E15, S23, N60, N62, N64, N66 have provision for A380 FEGP and PCA
- Note only two jetties are available at HKG and these will be attached at M1L and U1L
- Stands N60/N62/N64 reached via a track transit system which takes approx. 10 mins from the main passenger terminal

DEPARTURE**Starting and Taxi**

- Parking bays generally have two standard pushback procedures, pushback BLUE and pushback RED; the colour defines the direction the aircraft faces after pushback.
- When commencing taxi pilots are requested to use minimum breakaway thrust.

Departure

- When departing from Rwy 07L there is a significant risk of aircraft taking off from Twy A instead of Rwy 07L. Beware when turning from Twy B to Rwy 07L so as not to confuse Twy A with Rwy 07L. The risk is promulgated as a Hot Spot in the AERODROME OVERVIEW chart.
- Non-standard acceleration altitudes Rwy 07. Check CARD notes.
- RW07 departures have a right turn over PORPA or ROVER. These must be checked as being coded as FLY-OVER waypoints in the FMS and MUST be flown over. An early turn prior to these waypoints will result in a hard EGPWS warning.
- Any speed restriction on departure such as 220 kt will require Flap 1 to be maintained until acceleration is allowed

WEATHER

- Jan-Apr: Low stratus and drizzle, ceiling down to 600ft (300ft over the sea), particularly in the mornings
- May-Sep: SW Monsoon period with Cb and heavy rain. TYPHOONS (3-4 per season).
- Oct-Dec: NE Monsoon. Good weather.

Windshear and Turbulence

- Due to the proximity of the hilly terrain of Lantau Island to the S and E, significant low level WINDSHEAR and moderate to severe turbulence can be expected when winds blow from E through S to SW at about 15 kt or more. Due to terrain and land-sea breeze effects, the surface winds at the airport are generally not good indications of the prevailing winds. Instead pilots should use the wind conditions at about 2000ft along the approach to assess the likelihood of significant local effects further down the approach. The magnitude of WINDSHEAR and turbulence can be expected to increase towards final.
- Whilst the Hong Kong charts describe significant wind phenomena, they do not go in to detail about the systems that are used and how reports passed by ATC regarding WINDSHEAR should be interpreted by the crew.
- There are two WINDSHEAR detection systems specifically in use at Chek Lap Kok:
 - WINDSHEAR and Turbulence Warning System (WTWS)
 - Terminal Doppler Weather Radar (TDWR)

WTWS

- This system is the most comprehensive and advanced terminal WINDSHEAR and turbulence detection system in the world. The main goal of WTWS is to provide real-time WINDSHEAR and turbulence alerts to pilots through tower controllers to enhance flight safety in the terminal area.
- The WTWS makes use of a network of anemometers around the airport to detect terrain induced low-level WINDSHEAR. The difference in windspeed and direction measured at adjacent anemometers is used to determine the location and magnitude of the horizontal WINDSHEAR in the arrival and departure corridors.

TDWR

- This system supplements the WTWS by using an advanced data processing algorithm which is applied to other raw data to detect terrain induced WINDSHEAR and turbulence in clear air.

Alert Types

- The systems report 3 types of alerts:

Alert Type	Description
Microburst	Only generated by the TDWR and indicates WINDSHEAR events with wind loss of 30kt or more
WINDSHEAR	Can be generated by both the TDWR and WTWS. It indicates a WINDSHEAR event with wind speed loss or gain of 15 kts or greater except for microburst.
Turbulence	Only generated by the WTWS. The minimum threshold setting is for moderate turbulence relative to heavy commercial aircraft.

ATC Reporting

- An event is analysed and reported when it falls within 3nm of the runway thresholds based on observations made by the weather sensors
- The reports will be in the following format and there will only be one WINDSHEAR/microburst alert for each runway at any time.

CAUTION: WINDSHEAR plus 15 knots on departure.

- Unlike some US systems, this means that the aircraft may encounter the WINDSHEAR event with the maximum intensity anywhere along the corridor and there may be more than one event.
- The event will also be shown on the relevant ATIS as:
 - Significant WINDSHEAR forecast 25L and 25R
- In the case of multiple WINDSHEAR occurrences being detected by WTWS and TWDR there is a system of priorities to determine what is reported by ATC. All occurrences are integrated in to one report based on the following table.
- Alert type priorities are:

Priority	Alert Type
Highest	TDWR Microburst
	WTWS WINDSHEAR of minus 30kt or greater
	TDWR WINDSHEAR of minus or plus 15 kts or greater except Microburst
Lowest	WTWS WINDSHEAR of minus or plus 15 kts or greater

- Microbursts are only reported by the TDWR system
- They will be reported in a similar format to WINDSHEAR, e.g. Caution, Microburst minus 30 knots on final approach.
- A turbulence warning may be reported in conjunction with a Microburst or WINDSHEAR alert, e.g. Caution, WINDSHEAR minus 20 knots and moderate turbulence on departure

Typhoons

- Hong Kong issues warnings of Typhoon activity within the area 10°-30°N and 105°-125°E, commencing 48 hours before expected passage of typhoon through Hong Kong. Simfest Ops will advise all ground stations of typhoon activity. Typhoon information is passed in plain language by the normal Met Broadcast and by Company messages. Advance warning is good, as is strength forecasting. The weather data below is compiled from observations made for the old Kai Tak airport adjacent to Kowloon opposite Hong Kong Island. There is a Simfest Typhoon Conditions Code described below.
- **SIMFEST TYPHOON, HURRICANE OR CYCLONE CONDITIONS**
 - SIMFEST CONDITION I – Winds are forecast to increase to 50 kt within 48 to 24 hours
 - SIMFEST CONDITION II – Winds are forecast to increase to 50kt within 24 to 12 hours. Aircraft are picketed or flown out of the area.
 - SIMFEST CONDITION III – 50 kt winds are forecast within 12 hours, are imminent or are actually being experienced. No aircraft operations except in an emergency.
 - SIMFEST CONDITION IV – Winds reduced to less than 50kt after passage. Aircraft operations resume.

OPERATIONAL INFORMATION

Handling Agent	Jardine Airport Services
Handling Agent VHF	131.8
Potable Water	Uplift Permitted

IF ONLY Electrical Power is required	Use at all times
If BOTH electrical power and air conditioning is required:	Use at all times