HONG KONG (HKG/VHHH)

Elevation 28ft

CATEGORY B

AV brief – not required

GENERAL

Threats

Terrain

- The airport for Hong Kong is built on reclaimed land to the N of Lantau. It is some 11 nm W of Hong Kong Island. On Lantau Island there is high ground which begins to rise 1 nm S of the airport reaching nearly 3100ft asl at 3 nm S and nearly 2600ft asl at 3.5 nm SE.
- The peak on Hong Kong Island reaches nearly 2000ft asl and is 12 nm E.
- 2 nm NE and only 1.5 nm N of the extended centreline to Rwy 25R is a peak to nearly 3300ft asl.
- The airport for Macau is some 20 nm 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 S to SW at about 15 kts or more. See HKG weather section for detailed information
- Significant ILS GP fluctuations may occur during approach to Rwy 25L due interference from taxiing aircraft. Check with ATC if GP aerial is protected or consider alternative approach/ runway.

ROUTE

Driftdown and Depressurisation

A32N A350 B747 B777 B787

Not Applicable

A380

- Driftdown/Depressurisation procedures apply on routes to HKG.

ARRIVAL

Initial Approach

ALL

- Ensure HKG ATC contacted at appropriate time as detailed on Operational Flight Plan. Contact Hong Kong radar 3 minutes before 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.
- Guanzhou 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 C7 or C8 will minimise taxi in, however, if landing beyond C7 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.

BAV 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 accordingly.
- 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 Rwys 25 and the missed approach for Rwys 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 25 kts 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 preceeding aircraft has vacated or departing aircraft has left the runway.

CAUTION:

- ***Significant ILS glidepath fluctuations are likely on Rwy 25L due to interference from aircraft taxiing in the vicinity of the GP aerial. Refer to warning published on Lido IAC ILS 25L. ATC will protect the GP signal when the weather conditions are visibility < 5 km and ceiling < 1000ft, but in better weather conditions signal fluctuations are likely. In this case, crews should consider using an alternative approach type or requesting a different runway.***

BAV Crew Reports
• *Significant glidepath fluctuations have been reported during an ILS approach to 25L due taxiing aircraft.*

Diversion Preference

B747 B777

1. Macau, if approach feasible (see MACAU Briefing Sheet located BAV FORUMS > OMC > VMMC).
2. Shenzhen.
3. Guangzhou.

A380

- *Limited alternates.*
- *ZGGG (Guangzhou) is in Mainland China about 100 nm North of VHHH and will be the fuel alternate. Passenger dispersion is limited. If a diversion is likely the plan would be to load sufficient fuel to use 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.*
- *Global Operations Flight Planning (GOFP) will be able to provide the most up to date information.*
- *Macao and Shenzen are not available for A380 operations.*
- *In the rare case of a diversion to the fuel alternate (Guangzhou – ZGGG) and unable to fuel and go to HKG, Ops have set up a procedure to disperse passengers back to HKG with regard to Visas and transport.*
- *In the event of a typhoon warning in force at the planned arrival time the flight will be delayed at LHR and operate the next day.*

ALL

1. Taipei.
2. Angeles City.
3. Guangzhou.
4. Beijing.
5. Shanghai.

Alternate and Diversion Airports

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

Diversion Airports			
MACAU	MFM/VMMC	21 nm/242°T	CAT B

- Macau is very close and reputed to have good handling, but has limited apron space so may well become congested fairly rapidly in time of mass diversions. Unlikely to suffer from Immigration/customs difficulties. Fuel is approved. **Macau is not suitable for A380 operations.**
- For northerly arrivals, aircraft are controlled by Hong Kong for the initial approach. Rwy 34 is fully Cat 2 equipped and provides the only AWO 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. See Macau Airfield Briefing Sheet.

Diversion Airports			
SHENZHEN	SZX/ZGSZ	21 nm/344°T	CAT A

- Located 30 nm to the NW. Little traffic and reputed to be acceptable from a traffic handling viewpoint. Straightforward approaches to Rwy 15/33. BAVirtual has handling contracts established for diversions and fuel is approved. Has more apron capacity than Macau and is therefore less likely to become congested. **Shenzhen is not suitable for A380 operations.**

Diversion Airports			
GUANGZHOU	CAN/ZGGG	74 nm/333°T	CAT A

- New airport opened August 2004. There are good surface links to Hong Kong for passenger transfer but extended delays may be experienced whilst coaches, etc. are organised. Handling by Guangzhou Airport Handling Corporation (GAHCO) 131.5.

Diversion Airports			
KAOHSIUNG	KHH/RCKH	359 nm/087°T	CAT A

- Located on the southern end of Taiwan. Can become congested at times of mass diversion. Immigration difficulties may be experienced but can be eased by contacting Jardines at HKG.

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

A350 B747 B777 B787

- Parking stands normally used are between N5-N9.

ALL

- 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 for A380) before STD.
  - In the event of Red Lightning warnings, re-fuelling and push backs are suspended. If warning becomes active whilst push-back in progress manoeuvre will be completed as soon as possible, then the crew has to continue without ground staff support.

BAV Crew Reports
• *Crew report loss of GPS when on stand N5. GPS returned after taxying clear of the apron.*

A380

Ground Operations

- Taxi routes available for A380 are marked in green on HKG Lido chart 3-50 and 3-60.
- A380 Stands are N60/62/64, E5 and S25.
- After disembarking aircraft will be towed off; complete full shutdown as departure is not for approximately 9 hours. Help keep cabin and cockpit cool while off stand by pulling down blinds and sunscreens.
- Stands N5, S23, N60, N62, N64, N66 have provision for A380 FGP and PCA.
- Please note that only two jetties are available at HKG. They will be attached at M1L and U1L.
- Stands N60/N62/N64 are reached via a track transit system which takes approximately 10 mins from the main passenger terminal.

- The table below shows historical data for the percentage of flights when the time between vacating the runway and parking the aircraft was greater than 7 minutes. An opportunity therefore existed to shut down engines 1 & 4 (or 2 & 3).

  Considerations

  1. Whilst taxiing, lookout and monitoring are of prime importance. The risk of GCOL must always be addressed;
  2. The time period of 7 minutes assumes a 5 minute engine cool-down period and also allows a buffer of 2 minutes to park the aircraft.

     Note: Shutting engines down whilst parking the aircraft could cause unnecessary distraction and is inadvisable;

  3. Ground testing has shown that there is no perceptible difference in manoeuvrability dependent on whether engines 2 & 3 or 1 & 4 are shut down.

Landing Runway	% Flights with Taxi-in time >7 Min
07L	11%
25R	54%

ALL

DEPARTURE

Clearance

- A-CDM implemented for all flights departing from HKG, TOBT will be set as per STD, ATC should be notified ± 5 minutes from STD when flight ready for departure. New TOBT should be set by ADM with agreement with flight crew when delay departure are expected.

Starting and Taxi

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

Departure

- When departing from Rwy 07L there is a significant risk of aircraft taking off from Taxiway A instead of Rwy 07L. Beware when turning from Taxiway B to Rwy 07L so as not to confuse Taxiway A with Rwy 07L. The risk is promulgated as a Hot Spot in the AERODROME OVERVIEW chart.
- Non-standard acceleration altitudes Rwys 07.

A380

- RW07 RNAV (non RF) 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.
- Rwy 07 RNAV (RF) SIDs are correctly coded to Fly-by waypoints PORPA or ROVER and follow RF arc.
- Any speed restriction on departure such as 220 kts will require Flap 1 to be maintained until acceleration is allowed.
- There is a non-standard acceleration and thrust reduction height on Easterly departures, check the performance app notes.

WEATHER

- JAN – APR. Low st and drizzle, ceiling down to 600ft (over the sea 300ft), 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 kts 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 finals.
- Whilst the Hong Kong charts describe significant wind phenomena, they do not go into 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 Chep 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 indicate WINDSHEAR events with wind loss of 30 kts 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 heave commercial aircraft.

ATC Reporting

- An event is analysed and reported when is falls within 3 nm 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 into one report based on the following table.
- Alert type priorities are:

Priority	Alert Type
Highest	TDWR Microburst.
	WTWS WINDSHEAR of minus 30 kts 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

- 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. BA will advise all 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 BA Typhoon Conditions Code, which has been used, in error, during communication with a BA aircraft. This code is described below.
- **BA TYPHOON, HURRICANE OR CYCLONE CONDITIONS**

BA CONDITION I	-	Winds are forecast to increase to 50 kt within 48 to 24 hours.
BA CONDITION II	-	Winds are forecast to increase to 50 kt within 24 to 12 hours. Aircraft are picketed or flown out of the area.
BA CONDITION III	-	50 kt winds are forecast within 12 hours, are imminent or are actually being experienced. **No aircraft operations except in emergency.**
BA CONDITION IV	-	Winds reduced to less than 50 kt after passage. Aircraft operations resume.

OPERATIONAL INFORMATION

Handling Agent	JARDINE AIRPORT SERVICES
Handling Agent VHF	121.8
Potable Water	Uplift Permitted

07R/25L 3800M//Crews have been advised to use APU to packs for TKOF (from HKG) to mitigate against fume events ex HKG. Send aircraft with U/S APUs on A380s with caution.

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