STANDARD OPERATING PROCEDURE (SOP)
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SUBJECT: Hong Kong Terminal Airspace Standard Operating Procedures Annex I

EFFECTIVE DATE: 09 SEP 2023

SCOPE: Outlines standard techniques for online ATC service in Hong Kong TMA positions on VATSIM.

1. PURPOSE

1.1 This Standard Operating Procedure (SOP) Annex I sets forth the procedures for all controllers providing terminal airspace air traffic control service in the Hong Kong Terminal Airspace (TMA) to improve communication, techniques, and to distinguish procedures that are specific to the online environment.

2. ROLES AND RESPONSIBILITIES

2.1 The Office of Primary Responsibility (OPR) for this SOP is the team under the supervision of the Facilities Director. This SOP shall be maintained, revised, updated or cancelled by the Facilities Director. Any suggestions for modification / amendment to this SOP should be sent to the Facilities Director for review.

3. DISTRIBUTION

3.1 This SOP is intended for controllers staffing ATC positions in the Hong Kong TMA.

4. BACKGROUND

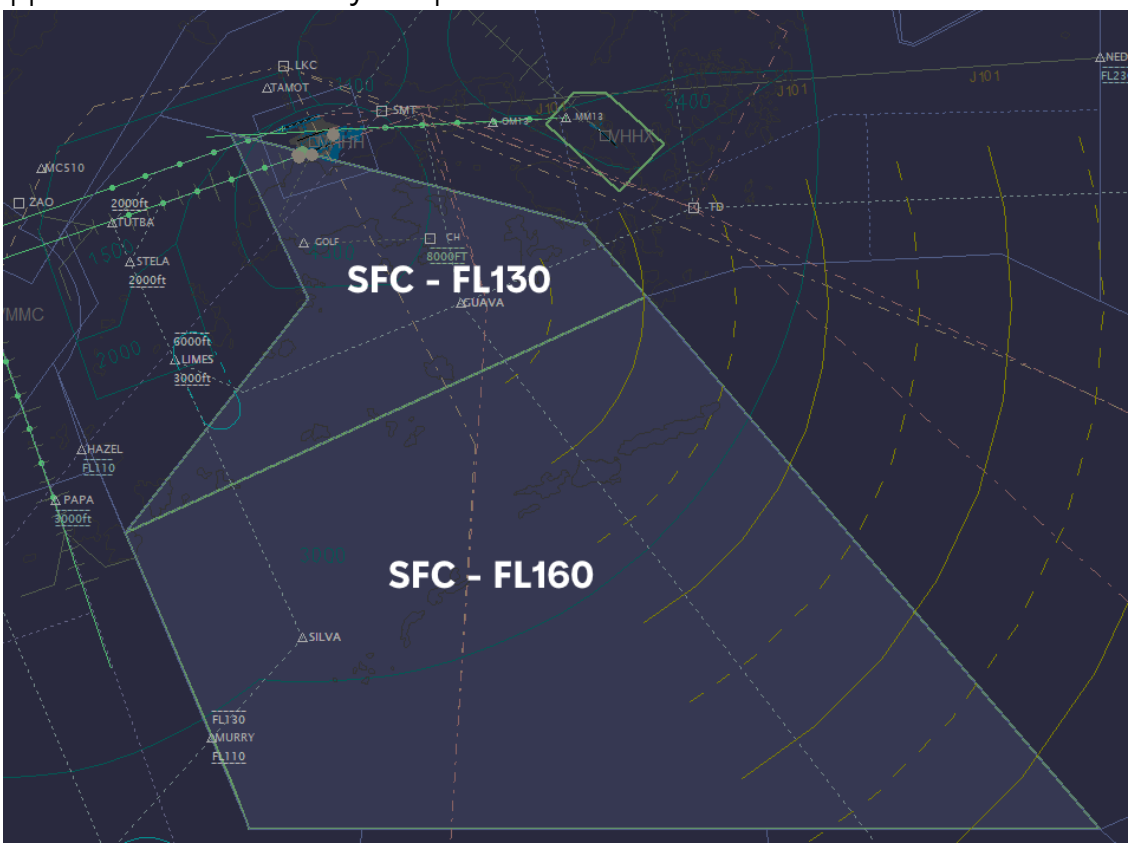
4.1 Due to the complexity of sectorisation within Approach/Departure airspace, a supplementary d ocument is required to support HKVACC-SOP004 so that controllers can have a clear idea on the responsibilities of different sectors within Approach/Departure airspace. This would also facilitate the coordination between controllers through standardising certain air traffic management strategies.

5. INFORMATION ON HANDOFF AGREEMENTS

5.1. For handoff agreements, an up arrow ↑ indicates that aircraft are to be transferred whilst still climbing to that altitude, while a down arrow ↓ indicates that aircraft are to be transferred whilst descending to that altitude. Agreements with no arrows indicates that aircraft are to be transferred at the exact altitude specified in the agreement.

6. HONG KONG APPROACH (APP)

6.1. Approach Sector in Runway 07 Operations



6.1.1. Responsibilities

- Arrivals from Terminal Radar & Departure High via ABBEY, BETTY and CANTO until transferred to FAD
- Departures to PECAN
- FAD sector when the traffic volume is low

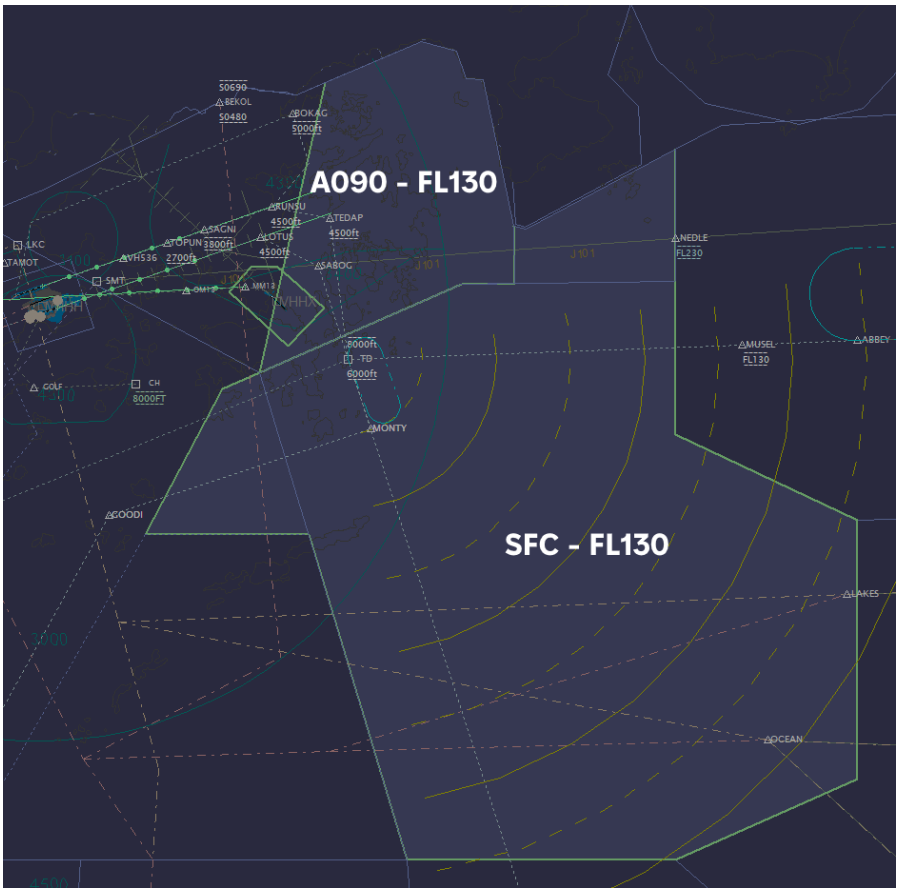
6.1.2. Procedures (Inbound)

- Descend arrivals between 7000ft and FL110 on handoff from Terminal Radar or Departure
- Descend arrivals between 3000ft and 6000ft when clear of PECAN departures
- Transfer to FAD 7NM before LIMES

6.1.3. Procedures (Outbound)

- PECAN – Climb to 5000ft on SID track (Note in event of a catch up, 5000ft and 6000ft be used as required). When clear of arrivals climb to FL160 and transfer to TMS

6.2. Approach Sector in Runway 25 Operations



6.2.1. Responsibilities

- Arrivals from Terminal Radar & Departure via ABBEY, BETTY and CANTO until transferred to FAD
- FAD sector when the traffic volume is low

6.2.2. Procedures (Inbound)

- Descend arrivals to 6000ft on handoff from Terminal Radar or Departure
- Transfer to FAD 5NM before TD

6.3. Note to Hong Kong Approach

6.3.1.

During Runway 07 Noise Abatement Operations, the SID tracks route south after PORPA instead of routing via the harbour, bringing traffic out over the sea. The section of airspace around PORSH and RAMEN lies within Approach airspace, however this airspace is released to Hong Kong Departure for climb up to 6000ft. Departure will not climb traffic above 6000ft until they are clear of VHHH arrivals. Therefore, VHHH arrivals should be kept at 7000ft or above until they are clear of GUAVA/RAMEN.

6.4. Handoff Agreements

6.4.1. Runway 07 Operations

From Terminal Radar South (VHHH_S_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL130	MANGO
VHHX	FL140	Abeam MANGO

From Terminal Radar West (VHHH_W_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL110	MURRY
VHHX	FL140	Abeam MURRY

From Departure High (VHHH_H_DEP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL110	After TD
VHHX	FL120	After abeam TD

From Departure (VHHH_DEP) to Approach (VHHH_APP)

From	Altitude	Handoff Location
VHHH	5000ft	After PORPA
VHHX (SABNO1B, EPDOS1A, IDOSI1A, IDOSI1B, SIKOU1A)	↑ 9000ft	After WHISKEY

From Approach (VHHH_APP) to Director (VHHH_F_APP)

To	Altitude	Handoff Location
VHHH	↓ 3000 – 6000ft	7nm to LIMES

From Approach (VHHH_APP) to Departure (VHHH_DEP)

To	Altitude	Handoff Location
VHHX	↓ 8000ft	10nm to CH

From Approach (VHHH_APP) to Terminal Radar South (VHHH_S_APP)

From	Altitude	Handoff Location
VHHX (SABNO1B)	FL140	Abeam MANGO

From Approach (VHHH_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
VHHH, VMMC, ZGSZ	FL160	TITAN

From Approach (VHHH_APP) to Terminal Radar West (VHHH_W_APP)

From	Altitude	Handoff Location
VHHX (EPDOS1A, IDOSI1A, IDOSI1B, SIKOU1A)	FL140	10nm before sector boundary (note 1)

1. VHHX EPDOS1A, IDOSI1A & SIKOU1A departures will enter Terminal Radar South airspace near ALLEY. Coordination with TMS shall be done such that they do not conflict with VHHH & VMMC outbounds as well as VMMC inbounds via ROBIN.

6.4.2. Runway 25 Operations

From Terminal Radar South (VHHH_S_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL130	MANGO
VHHX	FL140	Abeam MANGO

From Terminal Radar East (VHHH_E_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL130	MUSEL
VHHX	FL140	Abeam MUSEL (note 1)

1. The airspace ceiling for Hong Kong Approach is FL130 at the boundary with Terminal Radar East, however for the purposes of handling VHHX inbound traffic this airspace is delegated to Hong Kong Approach up to FL140.

From Approach (VHHH_APP) to Director (VHHH_F_APP)

To	Altitude	Handoff Location
VHHH	↓ 6000 – 8000ft	5nm to TD
VHHH (ABBEY1G, BETTY1G)	↓ 5000ft	ALAPI (note 1)
VHHX	↓ 8000ft	After abeam TD

1. The initial approach fix for ABBEY/BETTY/CANTO1G arrivals is GUAVA, which lies within Departure airspace. This airspace is delegated to Hong Kong Director whenever an aircraft is on the procedure.

From Approach (VHHH_APP) to Departure (VHHH_DEP)

To	Altitude	Handoff Location
VHHX	↓ 8000ft	After abeam TD

From Approach (VHHH_APP) to Departure (VHHH_DEP)

From	Altitude	Handoff Location
VHHX (DOTMI, ELATO, ENVAR, NOMAN, SABNO)	↑ FL130	On approaching FL130
VHHX (EPDOS, IDOSI, SIKOU)	↑ FL110	On approaching FL110 (note 1)

VHHX EPDOS, IDOSI and SIKOU departures will be in close proximity with VHHH outbounds near TUNNA and SAMON. Hong Kong Departure shall be responsible for separating these departures against VHHH outbounds.

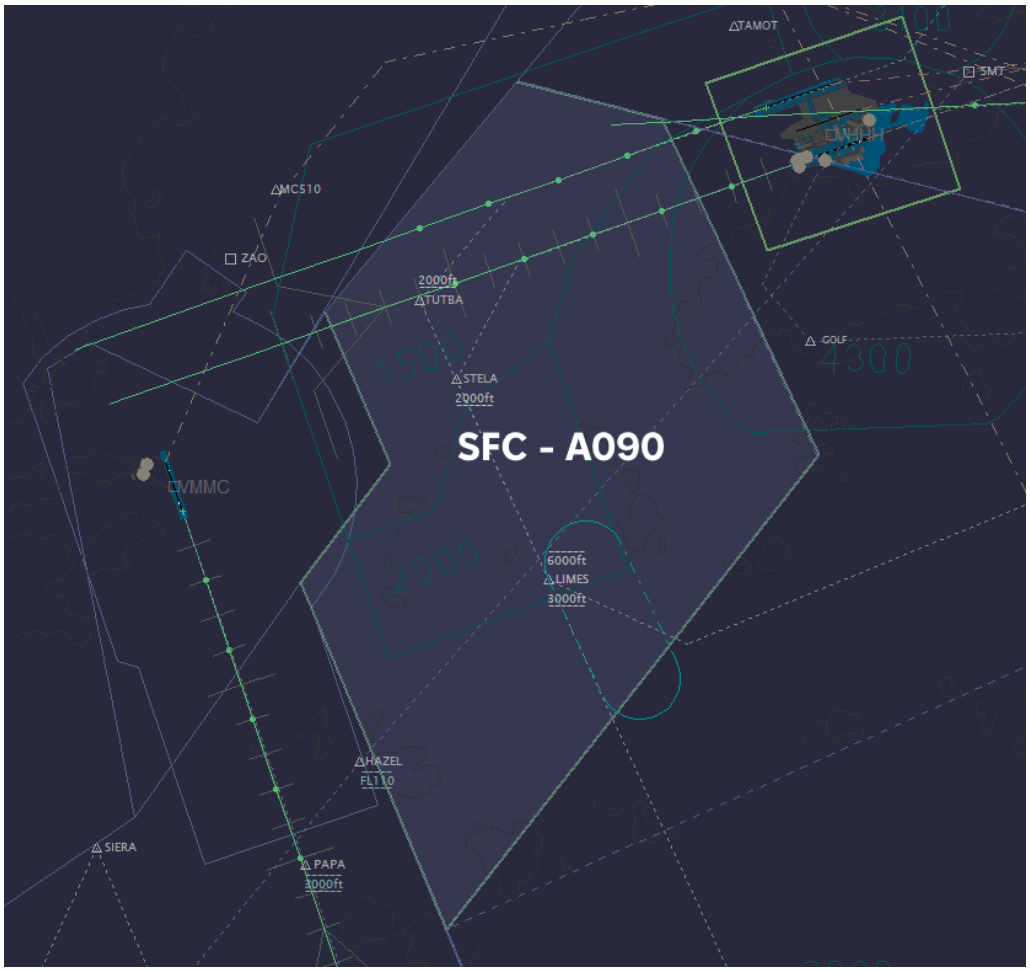
From Approach (VHHH_APP) to Departure High (VHHH_H_DEP)

From	Altitude	Handoff Location
VHHX (BEKOL1A)	↑ FL160	After JULIETT (note 1)

1. VHHX BEKOL1A departures will enter Director airspace near TH. Coordination shall be done with FAD such that they do not conflict with VHHH inbounds.

7. FINAL APPROACH DIRECTOR (FAD)

7.1. Final Approach Director Sector in Runway 07 Operations



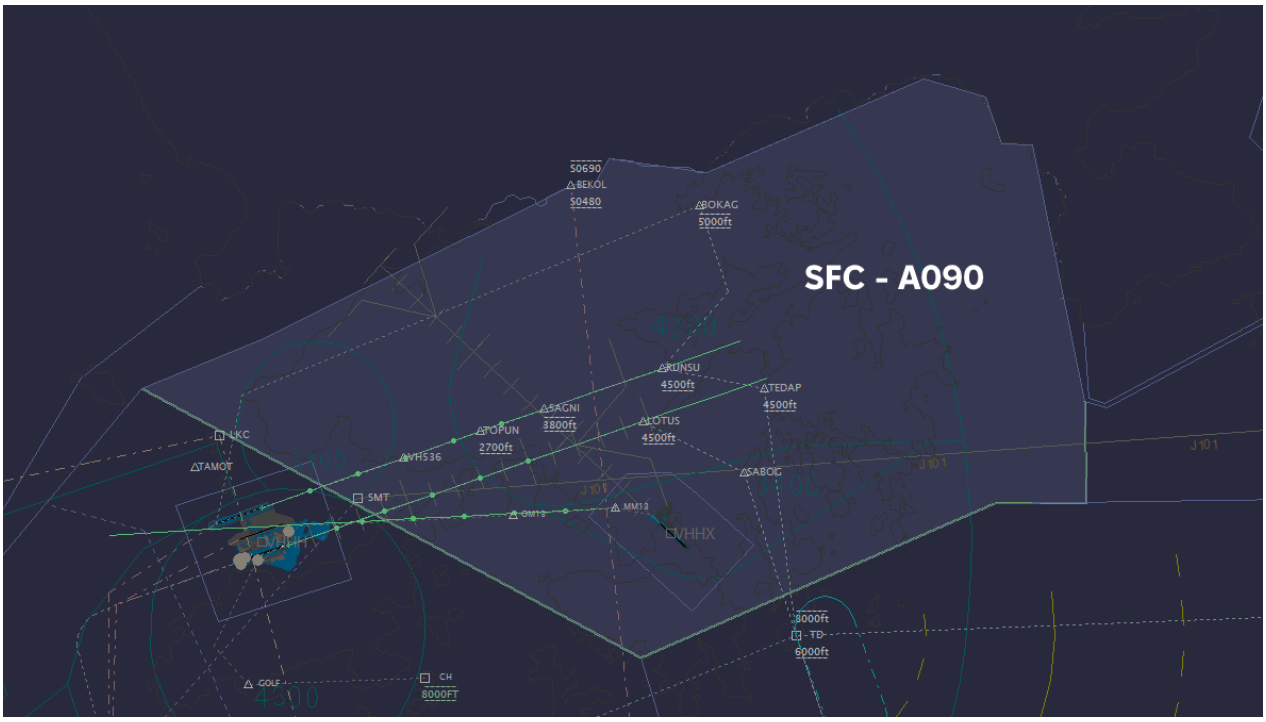
7.1.1. Responsibilities

- Tactically control aircraft to achieve accurate and consistent spacing
- Coordination between Tower and Final Approach Director regarding runway occupancy time (ROT) such that if the spacing results in a large number of late landing clearances, Tower must ask Final Approach Director to increase the spacing before missed approaches start to occur

7.1.2. Procedures

- Aircraft intercept localiser at 1700ft
- All aircraft fly a strict speed regime and then are permitted to reduce speed as required inside 5 DME. 180kts is used on base leg and 160kts to 5 DME

7.2. Final Approach Director Sector in Runway 25 Operations



7.2.1. Responsibilities

- Please refer to Section 6.1.1.

7.2.2. Procedures

- Aircraft intercept localiser at 4500ft
- All aircraft fly a strict speed regime and then are permitted to reduce speed as required inside 5 DME. 210kts is used on base leg, 180kts to 7 DME, and 160kts to 5 DME

7.3. Note to Final Approach Director

7.3.1. During strong northerly wind, ground speed increases on final causing increase in spacing (pull-away). Less than 4 miles spacing is required on base leg (vertical separation must be maintained) to achieve 4 miles on final. On the other hand, during strong southerly wind, ground speed reduces on final causing decrease in spacing (catch-up). More than 4 miles spacing is required on base leg but controlling speed during the turn is demanding. Not recommended to use NATS Style Final Approach Spacings (68-second spacing) in 07 operations.

7.3.2. During Runway 25 Operations, the IGS approach to Runway 13 at Kai Tak lies mostly within Director airspace. Therefore, the section of Departure airspace that contains the initial portion of the IGS approach (i.e. CH to GOLF) is delegated to Hong Kong Director whenever an aircraft flies the IGS approach. Hong Kong Director shall be mindful of VHHH arrivals conflicting with aircraft flying the IGS.

7.4. Handoff Agreements

7.4.1. Runway 07 Operations

From Approach (VHHH_APP) to Director (VHHH_F_APP)

To	Altitude	Handoff Location
VHHH	↓ 3000 – 6000ft	7nm to LIMES

7.4.2. Runway 25 Operations

From Approach (VHHH_APP) to Director (VHHH_F_APP)

To	Altitude	Handoff Location
VHHH	↓ 6000 – 8000ft	5nm to TD
VHHH (ABBEY1G, BETTY1G)	↓ 5000ft	ALAPI (note 1)
VHHX	↓ 8000ft	After TD

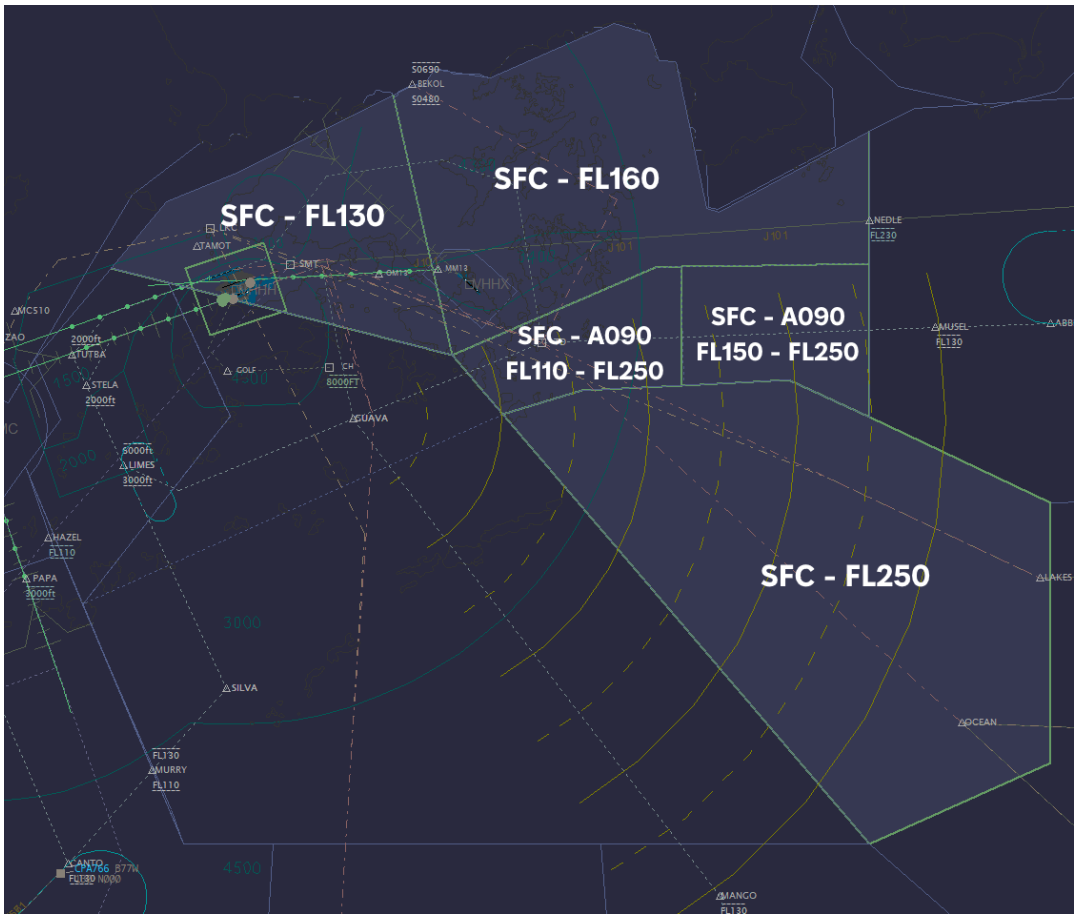
The initial approach fix for ABBEY/BETTY/CANTO1G arrivals is GUAVA, which lies within Departure airspace. This airspace is delegated to Hong Kong Director whenever an aircraft is on the procedure.

From Departure (VHHH_DEP) to Director (VHHH_F_APP)

To	Altitude	Handoff Location
VHHX	↓ 8000ft	On approaching 8000ft

8. HONG KONG DEPARTURE (DEP)

8.1. Departure Sector in Runway 07 Operations



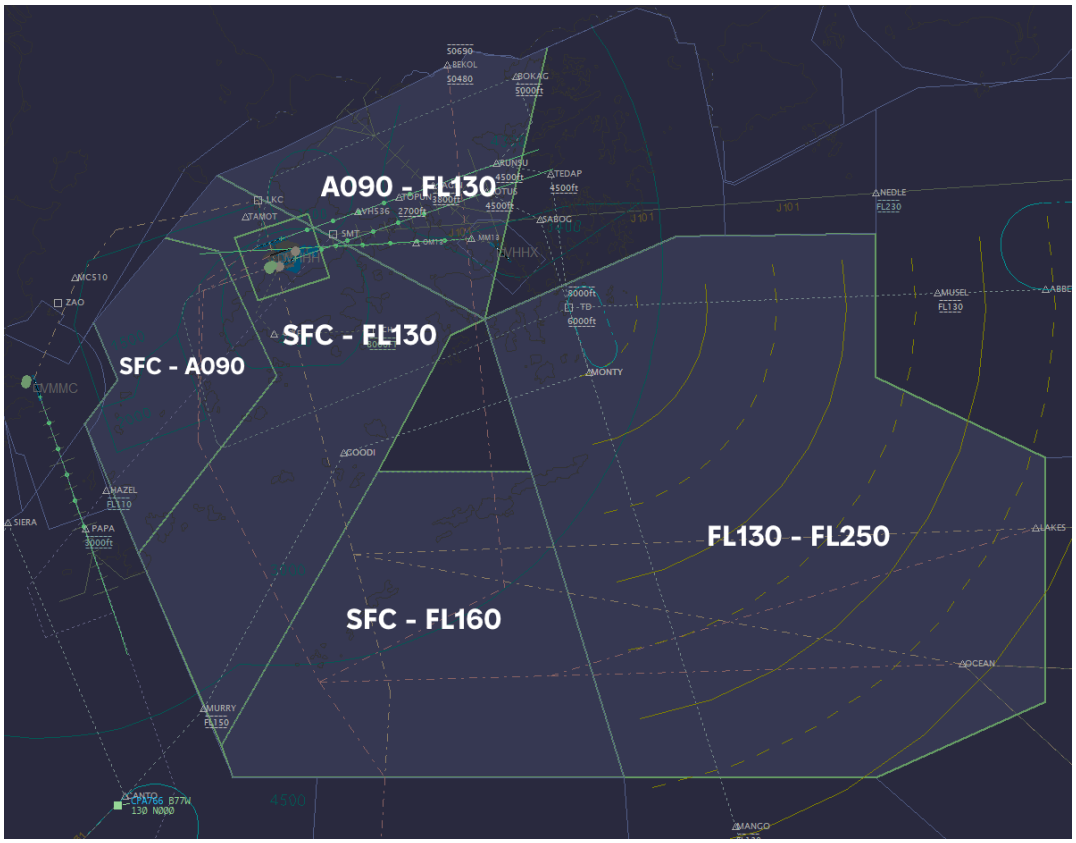
8.1.1. Responsibilities

- Hong Kong Departures
- Macau 34 Departures via Hong Kong FIR
- Shenzhen Arrivals via BEKOL
- DEH sector when the traffic volume is low

8.1.2. Procedures (Outbound)

- LAKES – Climb to 9000ft on SID track (Note in event of a catch up, 5000ft, 6000ft, 7000ft and 8000ft can be used as required). On passing TD and clear of VHHH arrivals, climb to FL170 (if RFL below S0690/FL226), FL230 (if RFL S0690/FL226 or above)
- OCEAN – Climb to 9000ft on SID track (Note in event of a catch up, 5000ft, 6000ft, 7000ft and 8000ft can be used as required). On passing TD and clear of VHHH arrivals, climb to FL250.
- BEKOL – Climb to 9000ft on SID track (Note in event of a catch up, 5000ft, 6000ft, 7000ft and 8000ft can be used as required). On passing TD and clear of VHHH arrivals, climb to FL160 and transfer to DEH, or climb to RFL if below FL160.
- PECAN – Climb to 6000ft on SID track and transfer to APP (Note in event of a catch up, 5000ft and 6000ft can be used as required)

8.2. Departure Sector in Runway 25 Operations



8.2.1. Responsibilities

- Hong Kong Departures
- Macau 34 Departures via Hong Kong FIR
- DEH sector when the traffic volume is low

8.2.2. Procedures (Outbound)

- LAKES/OCEAN – Climb to FL130 on SID track (Note in event of a catch-up, lower altitudes can be used as required). After passing the MURRY arrival corridor climb to FL160.. Reach FL140 by TROUT. After passing TROUT climb to FL250
- BEKOL – Climb to FL130 on SID track (Note in event of a catch-up, lower altitudes can be used as required). After passing the MURRY arrival corridor, climb to FL160 and transfer to DEH, or climb to RFL if below FL160 and transfer to DEH/APP as appropriate
- PECAN – Climb to FL130 on SID track (Note in event of a catch-up, lower altitudes can be used as required). After passing the MURRY arrival corridor, climb to FL160 and transfer to TMS

8.3.Note to Hong Kong Departure

8.3.1. During Runway 07 Noise Abatement Operations, the SID tracks route south after PORPA instead of routing via the harbour, bringing traffic out over the sea. The section of airspace around PORSH and RAMEN lies within Approach airspace, however this airspace is released to Hong Kong Departure for climb up to 6000ft. Approach will not descend traffic below 7000ft until they are clear of VHHH departures. Therefore, VHHH departures should be kept at 6000ft or below until they are clear of GUAVA/RAMEN.

8.3.2. During Runway 07 Operations, the IGS approach to Runway 13 at Kai Tak lies mostly within Departure airspace. Therefore, the section of Approach airspace that contains the initial portion of the IGS approach (i.e. CH to GOLF) is delegated to Hong Kong Departure whenever an aircraft flies the IGS approach. Hong Kong Departure shall be mindful of VHHH departures conflicting with aircraft flying the IGS.

8.3.3. During Runway 07 Operations with both Departure and Departure High online, the airspace around TD is split such that DEP owns the airspace from SFC to 9000ft, and from FL110 to FL250. Additionally, the airspace around TAMAR is split such that DEP owns the airspace from SFC to 9000ft, and from FL150 to FL250. This is done to facilitate ABBEY arrivals to VHHH. Departure shall not climb/descend aircraft without prior coordination with Departure High to prevent conflicts with arriving aircraft.

8.4. Handoff Agreements

8.4.1. Runway 07 Operations

From Departure (VHHH_DEP) to Approach (VHHH_APP)

From	Altitude	Handoff Location
VHHH	5000ft	After PORPA
VHHX (SABNO1B, EPDOS1A, IDOSI1A, IDOSI1B, SIKOU1A)	↑ 9000ft	After WHISKEY

From Departure (VHHH_DEP) to Departure High (VHHH_H_DEP)

From	Altitude	Handoff Location
VHHH	↑ FL160	After TD
VHHX (BEKOL1A)	↑ FL160	After JULIETT

From Departure (VHHH_DEP) to Area Radar East 1 (HKG_E1_CTR)

From	Altitude	Handoff Location
VHHH, VMMC (ELATO, ENVAR)	↑ FL250	OCEAN
VHHH, VMMC (DOTMI, LELIM)	↑ FL170, ↑ FL230	LAKES (note 1)
VHHX (DOTMI, ELATO, ENVAR)	↑ FL250	Abeam/At KILOG

1. Aircraft with RFL below S0690 (FL226) shall be climbed to FL170, whilst aircraft with RFL above S0690 (FL226) shall be climbed to FL230.

From Departure (VHHH_DEP) to Area Radar South (HKG_S_CTR)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (NOMAN, SABNO)	↑ FL250	OCEAN
VHHX (NOMAN1A, NOMAN1B, SABNO1A)	↑ FL250	Abeam OCEAN

From Departure (VHHH_DEP) to Zhuhai Approach (ZGJD_APP)

To	Altitude	Handoff Location
ZGSZ	S0180 (5900ft)	BEKOL (note 1)
ZGGG	S0420 (FL138), S0450 (FL148)	BEKOL (note 1)

1. This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

8.4.2. Runway 25 Operations

From Terminal Radar South (VHHH_S_APP) to Departure (VHHH_DEP)

To	Altitude	Handoff Location
VHHX	FL140	Abeam MANGO

From Terminal Radar South 1 (VHHH_S1_APP) to Departure (VHHH_DEP)

To	Altitude	Handoff Location
VHHX	FL140	Abeam MANGO

From Departure High (VHHH_H_DEP) to Departure (VHHH_DEP)

To	Altitude	Handoff Location
VHHX	FL130	Once clear of arrival corridor

From Departure (VHHH_DEP) to Director (VHHH_F_APP)

To	Altitude	Handoff Location
VHHX	↓ 8000ft	On approaching 8000ft

From Departure (VHHH_DEP) to Departure High (VHHH_H_DEP)

From	Altitude	Handoff Location
VHHH	↑ FL160	On approaching FL160 and clear of arrival corridor

From Departure (VHHH_DEP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
VHHH, VMMC	FL160	TITAN

From Departure (VHHH_DEP) to Area Radar East 1 (HKG_E1_CTR)

From	Altitude	Handoff Location
VHHH, VMMC (ELATO, ENVAR)	↑ FL250	OCEAN
VHHH, VMMC (DOTMI, LELIM)	↑ FL170, ↑ FL230	LAKES (note 1)
VHHX (DOTMI, ELATO, ENVAR)	↑ FL250	Abeam/At KILOG

1. Aircraft with RFL below S0690 (FL226) shall be climbed to FL170, whilst aircraft with RFL above S0690 (FL226) shall be climbed to FL230.

From Departure (VHHH_DEP) to Area Radar South (HKG_S_CTR)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (NOMAN, SABNO)	↑ FL250	OCEAN
VHHX (NOMAN1A, NOMAN1B, SABNO1A)	↑ FL250	Abeam OCEAN

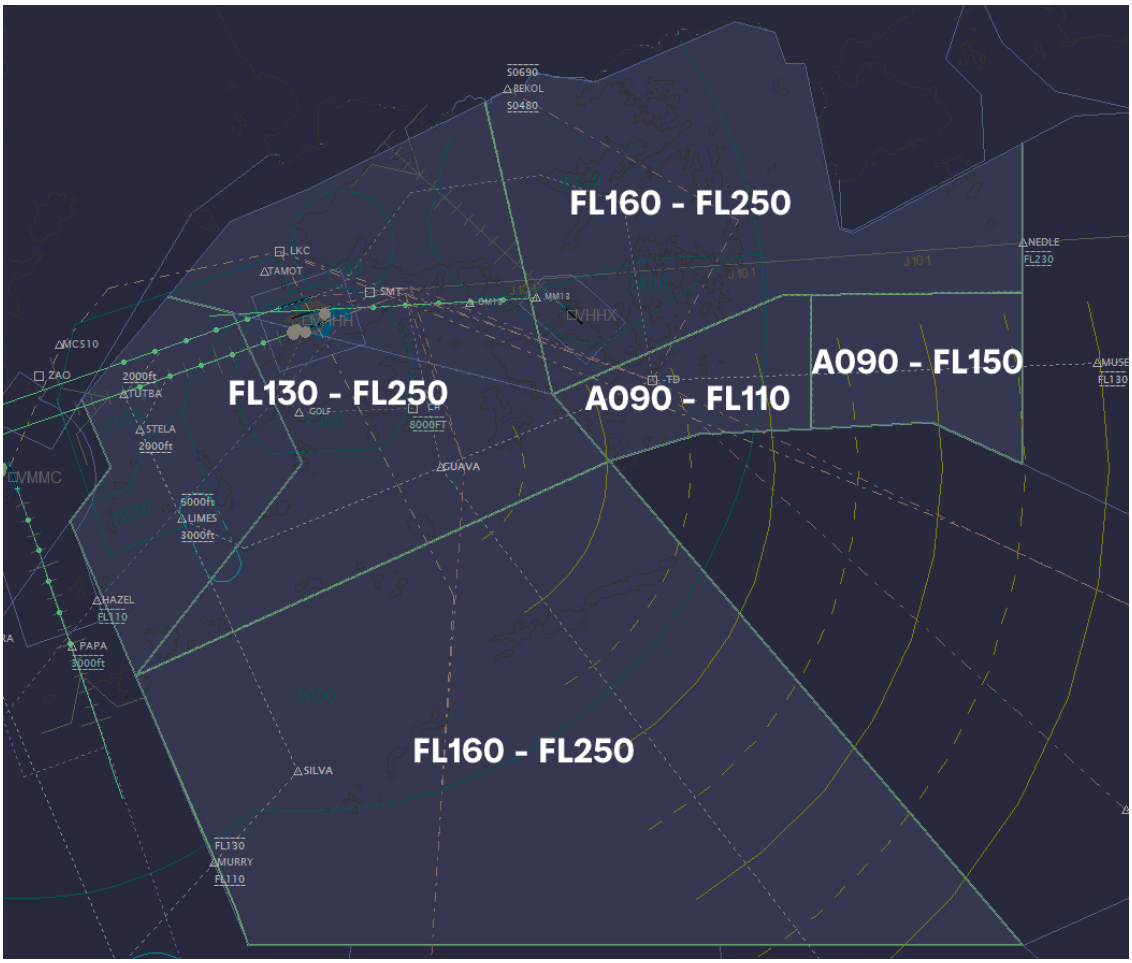
From Departure (VHHH_DEP) to Zhuhai Approach (ZGJD_APP)

To	Altitude	Handoff Location
ZGSZ	S0180 (5900ft)	BEKOL (note 1 & 2)

1. This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.
2. Aircraft flying BEKOL2B to ZGSZ will enter Director airspace. Coordination shall be made with FAD to prevent conflicts with VHHH 25 arrivals.

9. HONG KONG DEPARTURE HIGH (DEH)

9.1. Departure High Sector in Runway 07 Operations



9.1.1. Responsibilities

- Hong Kong Departures via BEKOL
- Hong Kong Arrivals via MUSEL
- Macau Arrivals from NEDLE
- Guangzhou Arrivals

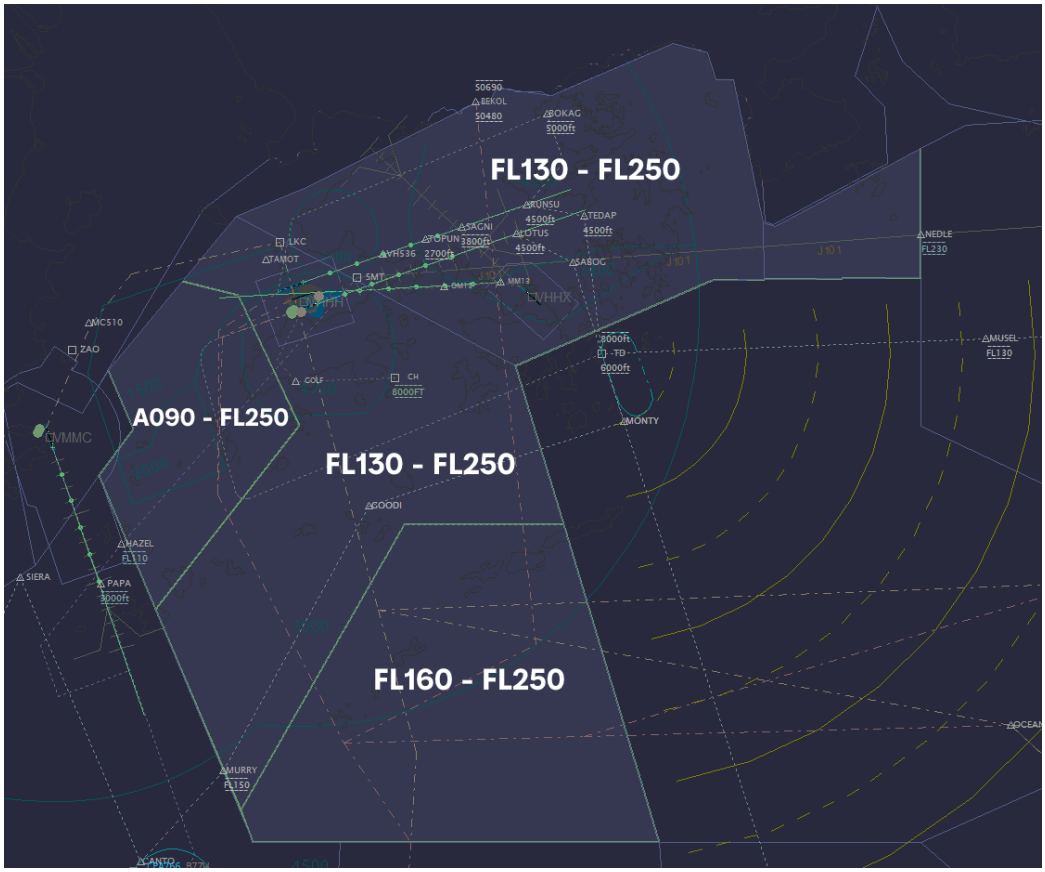
9.1.2. Procedures (Outbound)

- Climb BEKOL traffic via Guangzhou FIR to S0690 (FL226), ensuring that they are at least above S0480 (FL157) before transferring to Guangzhou Control

9.1.3. Procedures (Inbound)

- Descend VHHH arrivals via MUSEL to FL110 then transfer to APP
- Clear VMMC arrivals via SMT for the STAR (SMT4A/SMT5B) and descend them to FL110, then transfer to MCR
- Descend ZGGG arrivals to S0420 (FL138) or S0450 (FL148), then transfer to Zhuhai Approach. Coordinate with DEP for aircraft transferred at S0420 (FL138)

9.2. Departure High Sector in Runway 25 Operations



9.2.1. Responsibilities

- Hong Kong Departures via BEKOL
- Hong Kong Arrivals via MURRY
- Macau Arrivals from NEDLE
- Guangzhou Arrivals

9.3. Note to Hong Kong Departure High

9.3.1. During Runway 07 Operations with both Departure and Departure High online, the airspace around TD is split such that DEH owns the airspace from 9000ft to FL110, and the airspace around TAMAR is split such that DEH owns the airspace from 9000ft to FL150. The airspace below and above DEH in these two sectors are owned by Hong Kong Departure. This is done to facilitate ABBEY arrivals to VHHH. Departure High shall not climb/descend aircraft without prior coordination with DEP to prevent conflicts with outbound aircraft from VHHH/VMMC.

9.3.2. Procedures (Outbound)

- Climb BEKOL traffic via Guangzhou FIR to S0690 (FL226), ensuring that they are at least above S0480 (FL157) before transferring to Guangzhou Control

9.3.3. Procedures (Inbound)

- Descend VHHH arrivals via MURRY to FL140 after crossing GOODI and clear of the departure corridor, then transfer to APP
- Clear VMMC arrivals via SMT for the STAR (SMT4A/SMT5B) and descend them to FL110, then transfer to MCR
- Descend ZGGG arrivals to S0420 (FL138) or S0450 (FL148), then transfer to Zhuhai Approach. Coordinate with DEP for aircraft transferred at S0420 (FL138)

9.4. Handoff Agreements

9.4.1. Runway 07 Operations

From Departure (VHHH_DEP) to Departure High (VHHH_H_DEP)

From	Altitude	Handoff Location
VHHH	↑ FL160	On approaching FL160 and clear of arrival corridor

From Approach (VHHH_APP) to Departure High (VHHH_H_DEP)

From	Altitude	Handoff Location
VHHX (BEKOL1A)	↑ FL160	After JULIETT (note 1)

1. VHHX BEKOL1A departures will enter Director airspace near TH. Coordination shall be done with FAD such that they do not conflict with VHHH inbounds.

From Terminal Radar East (VHHH_E_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VMMC, ZGGG	FL230	NEDLE

From Terminal Radar South 1 (VHHH_S1_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
ZGGG	FL220	SAPAX

From Terminal Radar East (VHHH_E_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VHHH	FL130	MUSEL

From Departure High (VHHH_H_DEP) to Guangzhou Control (ZGGG_CTR)

To	Altitude	Handoff Location
Guangzhou FIR	↑ S0690 (FL226) but not below S0480 (FL157)	BEKOL (note 1)

1. This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

From Departure High (VHHH_H_DEP) to Zhuhai Approach (ZGJD_APP)

To	Altitude	Handoff Location
ZGGG	S0420 (FL138), S0450 (FL148)	TAMOT (note 1 & 2)

1. This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.
2. Descent to S0420 (FL138) requires coordination with DEP due to DEP airspace ceiling being FL130.

From Departure High (VHHH_H_DEP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	HAZEL

From Departure High (VHHH_H_DEP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL110	After TD

9.4.2. Runway 25 Operations

From Departure High (VHHH_H_DEP) to Guangzhou Control (ZGGG_CTR)

To	Altitude	Handoff Location
Guangzhou FIR	↑ S0690 (FL226) but not below S0480 (FL157)	BEKOL (note 1)

1. This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

From Departure (VHHH_DEP) to Departure High (VHHH_H_DEP)

From	Altitude	Handoff Location
VHHH	↑ FL160	After TD
VHHX (BEKOL1A)	↑ FL160	After JULIETT

From Terminal Radar East (VHHH_E_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VMMC, ZGGG	FL230	NEDLE

From Terminal Radar South 1 (VHHH_S1_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
ZGGG	FL220	SAPAX

From Terminal Radar West (VHHH_W_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VHHH	FL150	MURRY

From Terminal Radar West (VHHH_W_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VHHH	FL150	MURRY
VHHX	FL140	Abeam MURRY

From Departure High (VHHH_H_DEP) to Zhuhai Approach (ZGJD_APP)

To	Altitude	Handoff Location
ZGGG	S0420 (FL138), S0450 (FL148)	TAMOT (note 1 & 2)

1. This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.
2. Descent to S0420 (FL138) requires coordination with DEP due to DEP airspace ceiling being FL130.

From Departure High (VHHH_H_DEP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	HAZEL

From Departure High (VHHH_H_DEP) to Departure (VHHH_DEP)

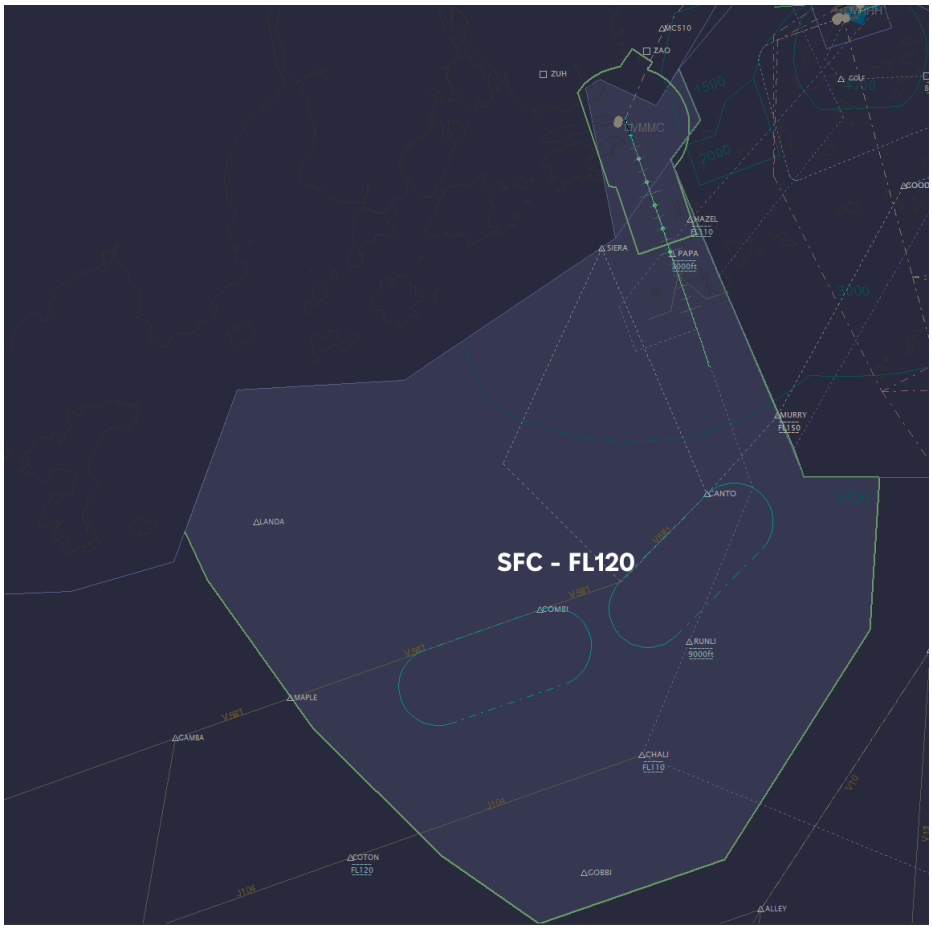
To	Altitude	Handoff Location
VHHX	FL130	Once clear of arrival corridor

From Departure High (VHHH_H_DEP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL140	After GOODI

10. MACAU RADAR CONTROL (MCR)

10.1. Macau Radar Sector



10.2. Responsibilities

- Macau 16 Departures
- Macau Arrivals
- Shenzhen Arrivals
- Holding at PAPA

10.3. Procedures (Outbound)

- SOUSA, CONGA, GRUPA – Climb to 9000ft and transfer to TMS
- ALLEY – Climb to FL120 and transfer to TMS
- BIGRO – Climb to S0150 (4900ft) and transfer to Zhuhai Approach on approaching U
- NLG, SHL – Climb to S0180 (5900ft) and transfer to Zhuhai Approach on approaching MCU

10.4. Procedures (Inbound)

- Clear VMMC arrivals via CHALI for their STAR (CHALI4A/CHALI5B)
- During Runway 34 Operations, clear VMMC arrivals for their approach (ILS X by default). Aircraft arriving via HAZEL should be given the QNH with the approach clearance as they will begin the approach at FL110
- During Runway 16 Operations, descend VMMC arrivals to S0270 (8900ft) and transfer to Zhuhai Approach before INDUS
- Descend ZGSZ arrivals to S0330 (FL108) and transfer to Zhuhai Approach before LANDA

10.5. Handoff Agreements

10.5.1. Runway 16 Operations

From Departure High (VHHH_H_DEP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	HAZEL

From Area Radar West (HKG_W_CTR) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL120	COTON

From Terminal Radar South 1 (VHHH_S1_APP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	15nm before CHALI

From Macau Radar Control (VMMC_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
VMMC (SOUSA, CONGA, GRUPA)	↑ 9000ft	After MULET
VMMC (ALLEY)	↑ FL120	After MULET

From Macau Radar Control (VMMC_APP) to Zhuhai Approach (ZGJD_APP)

To	Altitude	Handoff Location
VMMC	S0270 (8900ft)	INDUS (note 1)
ZGSZ	S0330 (FL108)	LANDA (note 1)

1. This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

10.5.2. Runway 34 Operations

From Departure High (VHHH_H_DEP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	HAZEL

From Area Radar West (HKG_W_CTR) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL120	COTON

From Terminal Radar South 1 (VHHH_S1_APP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	15nm before CHALI

11. TERMINAL RADAR WEST (TMW)

11.1. Terminal Radar West Sector

11.2. Responsibilities

- Hong Kong Arrivals via CANTO/SIERA
- Shenzhen Departures via SIERA
- Holding at CANTO/COMBI

11.3. Runway 07 Operations

11.3.1. Procedures (Outbound)

- Climb Shenzhen Departures to FL250 and transfer to TM1

11.3.2. Procedures (Inbound)

- Clear VHHH arrivals for their STAR (CANTO3A/SIERA7A/SIERA7C) and descend to FL110, then transfer to APP

11.4. Runway 25 Operations

11.4.1. Procedures (Outbound)

- Climb Shenzhen Departures to FL250 and transfer to TM1

11.4.2. Procedures (Inbound)

- Clear VHHH arrivals for their STAR (CANTO2B/CANTO1G/SIERA6B/SIERA6D/SIERA1G) and descend to FL150, then transfer to DEH

11.5. Handoff Agreements

11.5.1. Runway 07 Operations

From Zhuhai Approach (ZGJD_APP) to Terminal Radar West (VHHH_W_APP)

From	Altitude	Handoff Location
ZGSZ	FL120	SIERA

From Area Radar West (HKG_W_CTR) to Terminal Radar West (VHHH_W_APP)

To	Altitude	Handoff Location
VHHH	FL260	MAPLE
VHHX	FL250	Abeam MAPLE

From Guangzhou Control (ZGGG_CTR) to Terminal Radar West (VHHH_W_APP)

To	Altitude	Handoff Location
VHHH	FL190, FL210, FL230	SIERA

From Approach (VHHH_APP) to Terminal Radar West (VHHH_W_APP)

From	Altitude	Handoff Location
VHHX (EPDOS1A, IDOSI1A, IDOSI1B, SIKOU1A)	FL140	10nm before sector boundary (note 1)

1. VHHX EPDOS1A, IDOSI1A & SIKOU1A departures will enter Terminal Radar South airspace near ALLEY. Coordination with TMS shall be done such that they do not conflict with VHHH & VMMC outbounds as well as VMMC inbounds via ROBIN.

From Terminal Radar West (VHHH_W_APP) to Area Radar West (HKG_W_CTR)

From	Altitude	Handoff Location
VHHX (IDOSI1B)	↑ FL250	On approaching FL250

From Terminal Radar West (VHHH_W_APP) to Area Radar West 1 (HKG_W1_CTR)

From	Altitude	Handoff Location
VHHX (EPDOS1A, IDOSI1A, SIKOU1A)	↑ FL250	On approaching FL250

From Terminal Radar West (VHHH_W_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL110 – FL130	MURRY
VHHX	FL140	Abeam MURRY

From Terminal Radar West (VHHH_W_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
ZGSZ	↑ FL250	After ROCCA

11.5.2. Runway 25 Operations

From Zhuhai Approach (ZGJD_APP) to Terminal Radar West (VHHH_W_APP)

From	Altitude	Handoff Location
ZGSZ	FL120	SIERA

From Area Radar West (HKG_W_CTR) to Terminal Radar West (VHHH_W_APP)

To	Altitude	Handoff Location
VHHH	FL260	MAPLE
VHHX	FL260	Abeam MAPLE

From Guangzhou Control (ZGGG_CTR) to Terminal Radar West (VHHH_W_APP)

To	Altitude	Handoff Location
VHHH	FL190, FL210, FL230	SIERA

From Approach (VHHH_APP) to Terminal Radar West (VHHH_W_APP)

From	Altitude	Handoff Location
VHHX (EPDOS1A, IDOSI1A, IDOSI1B, SIKOU1A)	FL140	10nm before sector boundary (note 1)

1. VHHX EPDOS1A, IDOSI1A & SIKOU1A departures will enter Terminal Radar South airspace near ALLEY. Coordination with TMS shall be done such that they do not conflict with VHHH & VMMC outbounds as well as VMMC inbounds via ROBIN.

From Terminal Radar West (VHHH_W_APP) to Area Radar West (HKG_W_CTR)

From	Altitude	Handoff Location
VHHX (IDOSI1B)	↑ FL250	On approaching FL250

From Terminal Radar West (VHHH_W_APP) to Area Radar West 1 (HKG_W1_CTR)

From	Altitude	Handoff Location
VHHX (EPDOS1A, IDOSI1A, SIKOU1A)	↑ FL250	On approaching FL250

From Terminal Radar West (VHHH_W_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VHHH	FL150	MURRY
VHHX	FL140	Abeam MURRY

From Terminal Radar West (VHHH_W_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
ZGSZ	↑ FL250	After ROCCA

12. TERMINAL RADAR SOUTH 1 (TM1)

12.1. Terminal Radar South 1 Sector

12.2. Responsibilities

- Hong Kong/Macau/Shenzhen Departures via TITAN
- Shenzhen Departures via SKATE/ALLEY
- Macau Arrivals via ROBIN
- Guangzhou Arrivals from the Southwest

12.3. Note to Terminal South 1

12.3.1. During Runway 07 Operations, Approach will climb PECAN departures to FL160 and transfer them whilst inbound TITAN. It is recognised that aircraft will often reach FL160 before passing TITAN, therefore, to mitigate this a blanket release procedure is available to TM1. To avoid having to individually coordinate every aircraft, TM1 can request that DEH release the airspace above FL160 to climb PECAN departures to FL250 before reaching TITAN. It is essential that DEH is notified whenever this procedure is in effect.

12.4. Procedures (Outbound)

- Climb Hong Kong/Macau/Shenzhen Departures to FL250 and transfer to TRW/TW1

12.5. Procedures (Inbound)

- Descend VMMC arrivals to FL110 to be level 15NM before CHALI and transfer to MCR
- Descend ZGGG arrivals to FL220 and transfer to DEH

12.6. Handoff Agreements

12.6.1. Runway 07 Operations

From Approach (VHHH_APP) / Departure (VHHH_DEP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
VHHH, VMMC	FL160	TITAN

From Macau Radar Control (VMMC_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
VMMC (SOUSA, CONGA, GRUPA)	↑ 9000ft	After MULET
VMMC (ALLEY)	↑ FL120	After MULET

From Terminal Radar West (VHHH_W_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
ZGSZ	↑ FL250	After ROCCA

From Area Radar South 1 (HKG_S1_CTR) to Terminal Radar South 1 (VHHH_S1_APP)

To	Altitude	Handoff Location
ZGGG	FL260	ISBAN
VHHX	FL250	Abeam ISBAN

From Area Radar West (HKG_W_CTR) to Terminal Radar South 1 (VHHH_S1_APP)

To	Altitude	Handoff Location
ZGGG	FL260	CHALI

From Terminal Radar South 1 (VHHH_S1_APP) to Area Radar West (HKG_W_CTR)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (SIKOU)	↑ FL250	ALLEY
ZGSZ (ELATO, ENVAR, NOMAN, SABNO)	FL250	On approaching FL250

From Terminal Radar South 1 (VHHH_S1_APP) to Area Radar West 1 (HKG_W1_CTR)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (IDOSI, EPDOS)	↑ FL250	ALLEY/LAXET

From Terminal Radar South 1 (VHHH_S1_APP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	15nm before CHALI

From Terminal Radar South 1 (VHHH_S1_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
ZGGG	FL220	SAPAX

From Terminal Radar South 1 (VHHH_S1_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHX	FL140	Abeam MANGO

12.6.2. Runway 25 Operations

From Approach (VHHH_APP) / Departure (VHHH_DEP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
VHHH, VMMC	FL160	TITAN

From Macau Radar Control (VMMC_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
VMMC (SOUSA, CONGA, GRUPA)	↑ 9000ft	After MULET
VMMC (ALLEY)	↑ FL120	After MULET

From Terminal Radar West (VHHH_W_APP) to Terminal Radar South 1 (VHHH_S1_APP)

From	Altitude	Handoff Location
ZGSZ	↑ FL250	After ROCCA

From Area Radar South 1 (HKG_S1_CTR) to Terminal Radar South 1 (VHHH_S1_APP)

To	Altitude	Handoff Location
ZGGG	FL260	ISBAN
VHHX	FL250	Abeam ISBAN

From Area Radar West (HKG_W_CTR) to Terminal Radar South 1 (VHHH_S1_APP)

To	Altitude	Handoff Location
ZGGG	FL260	CHALI

From Terminal Radar South 1 (VHHH_S1_APP) to Area Radar West (HKG_W_CTR)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (SIKOU)	↑ FL250	ALLEY
ZGSZ (ELATO, ENVAR, NOMAN, SABNO)	FL250	On approaching FL250

From Terminal Radar South 1 (VHHH_S1_APP) to Area Radar West 1 (HKG_W1_CTR)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (IDOSI, EPDOS)	↑ FL250	ALLEY/LAXET

From Terminal Radar South 1 (VHHH_S1_APP) to Macau Radar Control (VMMC_APP)

To	Altitude	Handoff Location
VMMC	FL110	15nm before CHALI

From Terminal Radar South 1 (VHHH_S1_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
ZGGG	FL220	SAPAX

From Terminal Radar South 1 (VHHH_S1_APP) to Departure (VHHH_DEP)

To	Altitude	Handoff Location
VHHX	FL140	Abeam MANGO

13. TERMINAL RADAR SOUTH (TMS)

13.1. Terminal Radar South Sector

13.2. Responsibilities

- Hong Kong Arrivals via BETTY

13.3. Runway 07 Operations

13.3.1. Procedures (Inbound)

- Clear VHHH arrivals for their STAR (BETTY2A), then descend to FL130 and transfer to APP

13.4. Runway 25 Operations

13.4.1. Procedures (Inbound)

- Clear VHHH arrivals for their STAR (BETTY2B/BETTY1G), then descend to FL130 and transfer to APP
- Holding at BETTY

13.5. Handoff Agreements

13.5.1. Runway 07 Operations

From Area Radar South (HKG_S_CTR) to Terminal Radar South (VHHH_S_APP)

To	Altitude	Handoff Location
VHHH	FL260	SONNY
VHHX	FL250	Abeam SONNY

From Area Radar South 1 (HKG_S1_CTR) to Terminal Radar South (VHHH_S_APP)

To	Altitude	Handoff Location
VHHH	FL260	CYBER
VHHX	FL250	Abeam CYBER

From Approach (VHHH_APP) to Terminal Radar South (VHHH_S_APP)

From	Altitude	Handoff Location
VHHX (SABNO1B)	FL140	Abeam MANGO

From Terminal Radar South (VHHH_S_APP) to Area Radar South 1 (HKG_S1_CTR)

From	Altitude	Handoff Location
VHHX	FL250	↑ On approaching FL250

From Terminal Radar South (VHHH_S_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL130	MANGO
VHHX	FL140	Abeam MANGO

13.5.2. Runway 25 Operations

From Area Radar South (HKG_S_CTR) to Terminal Radar South (VHHH_S_APP)

To	Altitude	Handoff Location
VHHH	FL260	SONNY
VHHX	FL250	Abeam SONNY

From Area Radar South 1 (HKG_S1_CTR) to Terminal Radar South (VHHH_S_APP)

To	Altitude	Handoff Location
VHHH	FL260	CYBER
VHHX	FL250	Abeam CYBER

From Approach (VHHH_APP) to Terminal Radar South (VHHH_S_APP)

From	Altitude	Handoff Location
VHHX (SABNO1B)	FL140	Abeam MANGO

From Terminal Radar South (VHHH_S_APP) to Area Radar South 1 (HKG_S1_CTR)

From	Altitude	Handoff Location
VHHX	FL250	↑ On approaching FL250

From Terminal Radar South (VHHH_S_APP) to Approach (VHHH_APP)

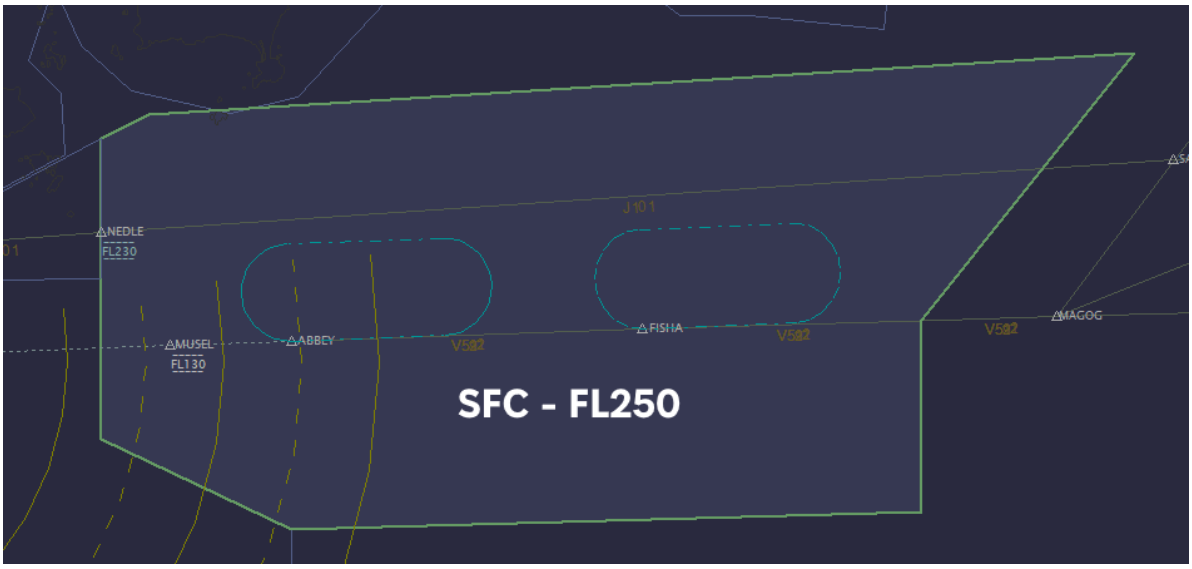
To	Altitude	Handoff Location
VHHH	FL130	MANGO
VHHX (NOMAN13)	FL140	Abeam MANGO

From Terminal Radar South (VHHH_S_APP) to Departure (VHHH_DEP)

To	Altitude	Handoff Location
VHHX (SABNO13)	FL140	Abeam MANGO

14. TERMINAL RADAR EAST (TME)

14.1. Terminal Radar East Sector



14.2. Responsibilities

- Hong Kong Arrivals via ABBEY
- Macau Arrivals via NEDLE
- Guangzhou Arrivals via ELATO
- Holding at ABBEY/FISHA

14.3. Runway 07 Operations

14.3.1. Procedures (Inbound)

- Clear VHHH arrivals for their STAR (ABBEY3A), then descend to FL130 and transfer to DEH

14.4. Runway 25 Operations

14.4.1. Procedures (Inbound)

- Clear VHHH arrivals for their STAR (ABBEY2B/ABBEY1G), then descend to FL130 and transfer to APP

14.5. Handoff Agreements

14.5.1. Runway 07 Operations

From Area Radar East (HKG_E_CTR) to Terminal Radar East (VHHH_E_APP)

To	Altitude	Handoff Location
VHHH	FL260	ENPET
VHHX	FL270	Abeam ENPET (note 1)
VMMC, ZGGG	FL260	After SAMMI

1. VHHX MAGOG13 arrivals are not laterally separated against VHHH ABBEY arrivals. Controllers shall use vertical separation where required.

From Terminal Radar East (VHHH_E_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VHHH	FL130	MUSEL

From Terminal Radar East (VHHH_E_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VMMC, ZGGG	FL230	NEDLE

14.5.2. Runway 25 Operations

From Area Radar East (HKG_E_CTR) to Terminal Radar East (VHHH_E_APP)

To	Altitude	Handoff Location
VHHH	FL260	ENPET
VHHX	FL270	Abeam ENPET (note 1)
VMMC, ZGGG	FL260	After SAMMI

1. VHHX MAGOG13 arrivals are not laterally separated against VHHH ABBEY arrivals. Controllers shall use vertical separation where required.

From Terminal Radar East (VHHH_E_APP) to Approach (VHHH_APP)

To	Altitude	Handoff Location
VHHH	FL130	MUSEL

From Terminal Radar East (VHHH_E_APP) to Departure High (VHHH_H_DEP)

To	Altitude	Handoff Location
VMMC, ZGGG	FL230	NEDLE

RECORD OF REVISION

DATE	REV.	REVISION CONTENT	APPROVAL
17 JUN 2020	0	Initial Release	J. CHENG
09 SEP 2023	1	Major Rewrite Added all 4 Terminal Radar Sectors Added Macau Radar Control Added Handoff Agreements	T. SIU