Hong Kong Virtual Area Control Centre (HKvACC)
Virtual Air Traffic Simulation Network (VATSIM)

Doc No.: HKVACC-SOP005-ANNEX-1-R5   Date Issued: 08 APR 2025
Subject: Hong Kong En-route Control Airspace Standard Operating Procedures Annex I

STANDARD OPERATING PROCEDURE (SOP)
DOCUMENT NUMBER: HKVACC-SOP005-ANNEX-I
DATE ISSUED: 08 APR 2025
REVISION: 5

SUBJECT: Hong Kong En-route Control Standard Operating Procedures Annex I

EFFECTIVE DATE: 08 APR 2025

SCOPE: Outlines standard techniques for online ATC service provided by controllers staffing Area Radar positions within Hong Kong FIR.

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1.   PURPOSE

1.1. This Standard Operating Procedure (SOP) sets forth the procedures for all controllers providing en-route air traffic control service within the Hong Kong FIR 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 Area Radar positions within Hong Kong FIR, as well as other controllers who interface with Area Radar controllers.

4.   BACKGROUND

4.1. Due to the complexity of sectorisation within Area Radar airspace, a supplementary document is required to support HKVACC-SOP005 so that controllers can have a clear idea on the responsibilities of different sectors within Area Radar 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. Agreements are only valid when aircraft are flying the correct route as listed in the Hong Kong AIP. Other traffic shall be individually coordinated. **Controllers shall note that there are no handoff agreements for transit traffic not landing at airports located near the boundary of Hong Kong FIR. Thus, this traffic shall be individually coordinated.**

6. AREA RADAR EAST ARRIVALS (TRK)

6.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)
- TRK -> TRE -> TRS -> TRW

6.2. Area Radar East Arrivals Sector
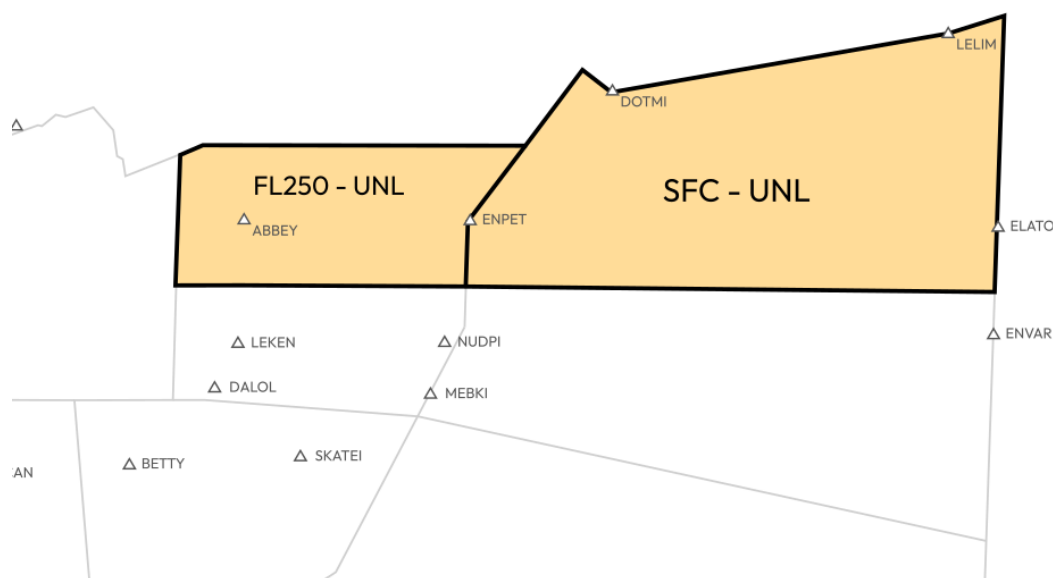
6.3. Responsibilities
- Arrivals from DOTMI, LELIM and ELATO
- Departures to DOTMI, LELIM and ELATO
- Transit Traffic to/from DOTMI and ELATO

6.4. General Procedures
- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TME / Shantou / Xiamen / Shanghai / Taipei

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6.5. Handoff Agreements

From Taipei FIR to Area Radar East Arrivals (TRK)

To	Altitude	Handoff Location
Hong Kong FIR	Westbound 6000ft or above	ELATO

From Shanghai CTA to Area Radar East Arrivals (TRK)

To	Altitude	Handoff Location
VHHH	FL300	LELIM
VHHH, VMMC	FL280, FL300	DOTMI
Hong Kong FIR	FL280, FL300, FL360, FL380	DOTMI

From Xiamen CTA to Area Radar East Arrivals (TRK)

To	Altitude	Handoff Location
Hong Kong FIR	S0660 (FL217), S0720 (FL236), S0780 (FL256)	DOTMI

From Shantou TMA to Area Radar East Arrivals (TRK)

To	Altitude	Handoff Location
Hong Kong FIR	S0420 (FL138)	DOTMI

From Area Radar East (TRE) to Area Radar East Arrivals (TRK)

From	Altitude	Handoff Location
VHHH, VMMC (DOTMI, LELIM, ELATO)	↑ RFL	Sector Boundary

From Area Radar East Arrivals (TRK) to Taipei FIR

To	Altitude	Handoff Location
Taipei FIR	Odd FLs at or below FL270	ELATO (note)

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

From Area Radar East Arrivals (TRK) to Shanghai CTA

To	Altitude	Handoff Location
Shanghai FIR	FL330, FL350	LELIM (note)
Shanghai FIR	S0810 (FL266), FL330, FL350, FL390	DOTMI (note)

Note: 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 Shanghai FIR when initiating a handoff per this agreement.

From Area Radar East Arrivals (TRK) to Xiamen CTA

To	Altitude	Handoff Location
ZSAM, ZSQZ, ZSFZ, ZSWY, ZSWZ	S0630 (FL207), S0750 (FL246)	DOTMI (note)

Note: 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 Shanghai FIR when initiating a handoff per this agreement.

From Area Radar East Arrivals (TRK) to Shantou TMA

To	Altitude	Handoff Location
ZGOW	S0450 (FL148)	DOTMI (note)

Note: 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 Shanghai FIR when initiating a handoff per this agreement.

From Area Radar East Arrivals (TRK) to Terminal Radar East (TME)

To	Altitude	Handoff Location
VHHH	FL260	ENPET
VMMC, ZGGG	FL260	After SAMMI

7.   AREA RADAR EAST (TRE)

7.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)
- TRE -> TRS -> TRW

7.2. Area Radar East Sector

7.3. Responsibilities
- Departures to DOTMI, LELIM, ELATO and ENVAR
- Arrivals from ELATO via TTR V525

7.4. General Procedures
- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to Taipei

7.5. Handoff Agreements

From Terminal Departures East (TDE) to Area Radar East (TRE)

From	Altitude	Handoff Location
VHHH, VMMC (ELATO, ENVAR)	↑ FL250	MEBKI
ZGSZ (ELATO, ENVAR)	↑ FL250	Sector Boundary
VHHH, VMMC (DOTMI, LELIM)	↑ FL170, ↑ FL230	NUDPI (note)

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

From Area Radar South (TRS) to Area Radar East (TRE)

From	Altitude	Handoff Location
VMMC, ZGSZ, ZGGG (DOTMI, ELATO, ENVAR)	↑ RFL	Sector Boundary

From Area Radar East (TRE) to Area Radar East Arrivals (TRK)

From	Altitude	Handoff Location
VHHH, VMMC (DOTMI, LELIM, ELATO)	↑ RFL	Sector Boundary

From Area Radar East (TRE) to Taipei FIR

| To	Altitude	Handoff Location
Taipei FIR	FL270, Eastbound RVSM FLs, FL450, FL490	ENVAR (note)

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

8. AREA RADAR SOUTH (TRS)

8.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)
- TRS -> TRW

8.2. Area Radar South Sector
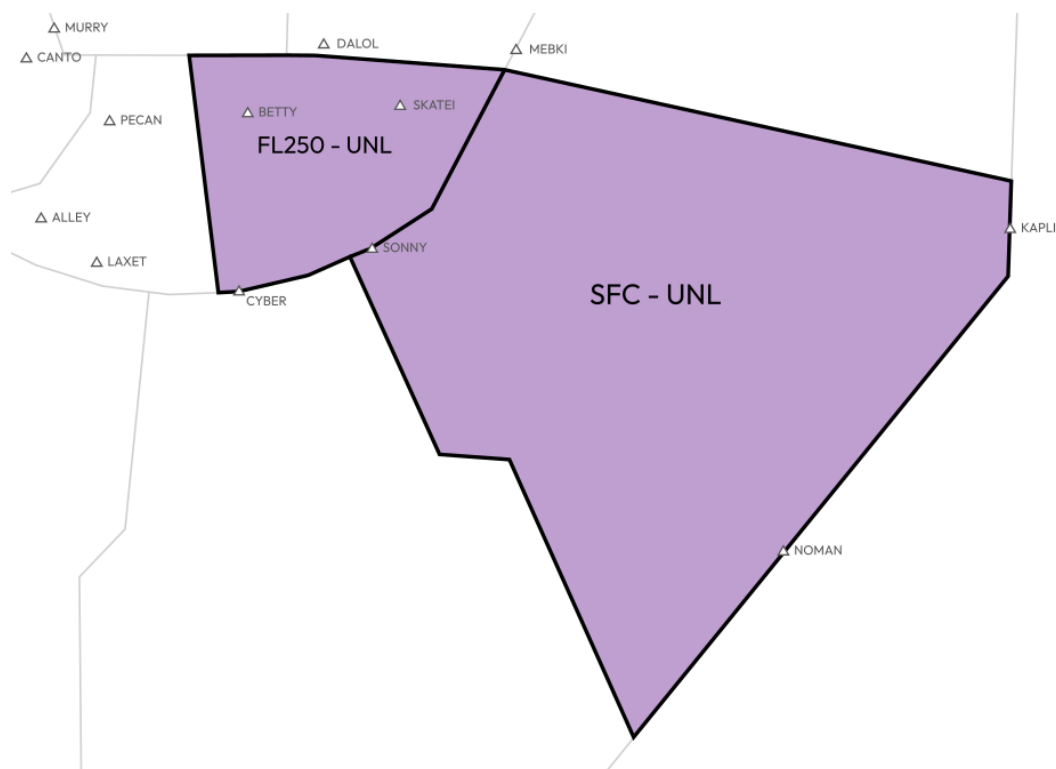
8.3. Responsibilities
- Departures to NOMAN, SABNO and KAPLI
- Arrivals from NOMAN
- Transit Traffic to/from KAPLI

8.4. General Procedures
- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TMS / Taipei / Manila

8.5. Handoff Agreements

From Terminal Departures East (TDE) to Area Radar South (TRS)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (NOMAN, SABNO, KAPLI)	↑ FL250	SKATE

From Area Radar South (TRS) to Taipei FIR

To	Altitude	Handoff Location
Taipei FIR	FL290, FL330, FL370, FL390, FL410	KAPLI (note)

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

From Area Radar South (TRS) to Manila FIR

To	Altitude	Handoff Location
Manila FIR	FL290, FL330, FL370	NOMAN (note)

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

From Area Radar South (TRS) to Area Radar East (TRE)

From	Altitude	Handoff Location
VMMC, ZGSZ, ZGGG (DOTMI, ELATO, ENVAR)	↑ RFL	Sector Boundary

From Area Radar South (TRS) to Area Radar Central (TRC)

From	Altitude	Handoff Location
VHHH, VMMC, ZGSZ, ZGGG (SABNO)	↑ RFL	Sector Boundary

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From Area Radar South (TRS) to Terminal Radar South (TMS)

To	Altitude	Handoff Location
VHHH	FL260	SONNY

9. AREA RADAR CENTRAL (TRC)

9.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)
- TRC -> TRS -> TRW

9.2. Area Radar Central Sector
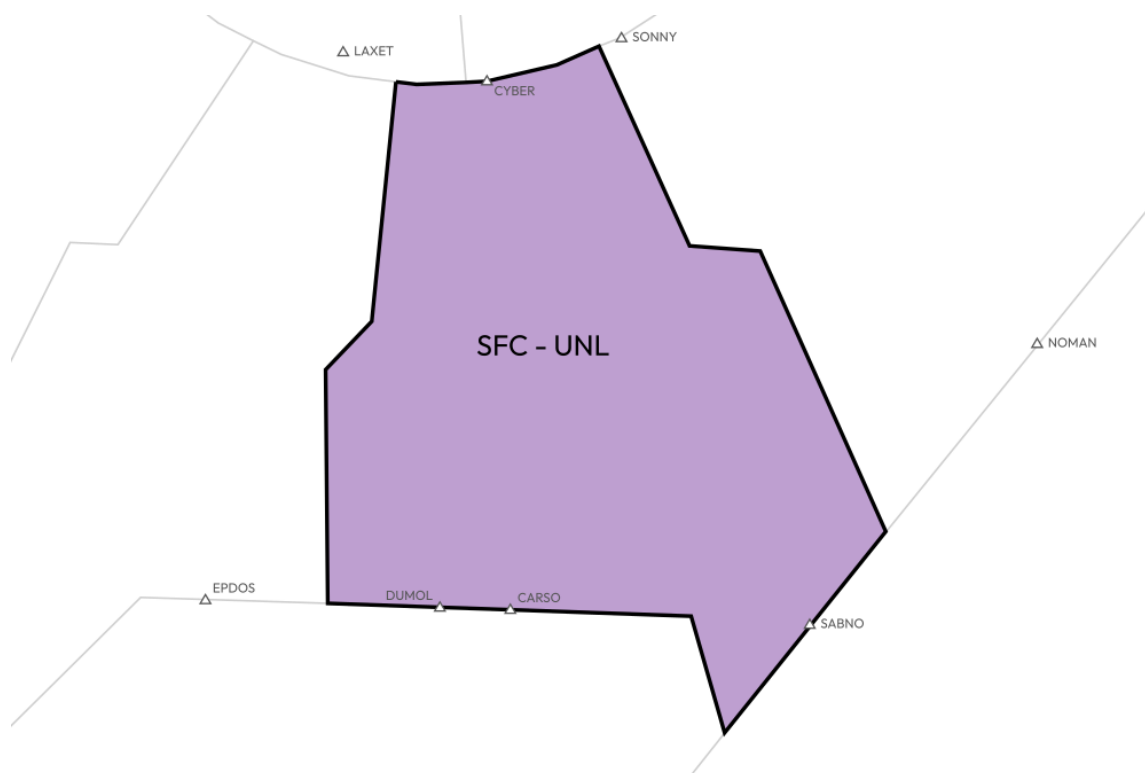
9.3. Responsibilities
- Departures to SABNO
- Arrivals from SABNO, ASOBA and DOSUT
- Transit Traffic to/from SABNO, ASOBA and DOSUT

9.4. General Procedures
- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TMS / TDC / Manila

9.5. Handoff Agreements

From Manila FIR to Area Radar Central (TRC)

To	Altitude	Handoff Location
Hong Kong FIR	FL300, FL340, FL380	SABNO

From Area Radar West (TRD) to Area Radar Central (TRC)

To	Altitude	Handoff Location
VHHH	RFL	CARSO
ZGSZ, ZGGG, VMMC	RFL	DUMOL

From Area Radar Central (TRC) to Manila FIR

To	Altitude	Handoff Location
Manila FIR	FL290, FL330, FL370, FL410	SABNO (note)

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

From Area Radar Central (TRC) to Terminal Radar South (TMS)

To	Altitude	Handoff Location
VHHH	FL260	CYBER

From Area Radar Central (TRC) to Terminal Departures Central (TDC)

To	Altitude	Handoff Location
ZGGG	FL260	ISBAN
ZGSZ, VMMC	FL200	ISBAN

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10.   AREA RADAR WEST (TRW)

10.1.   Airspace Ownership Priority (Positions on the left have priority over positions on the right)
- TRW

10.2.   Area Radar West Sector
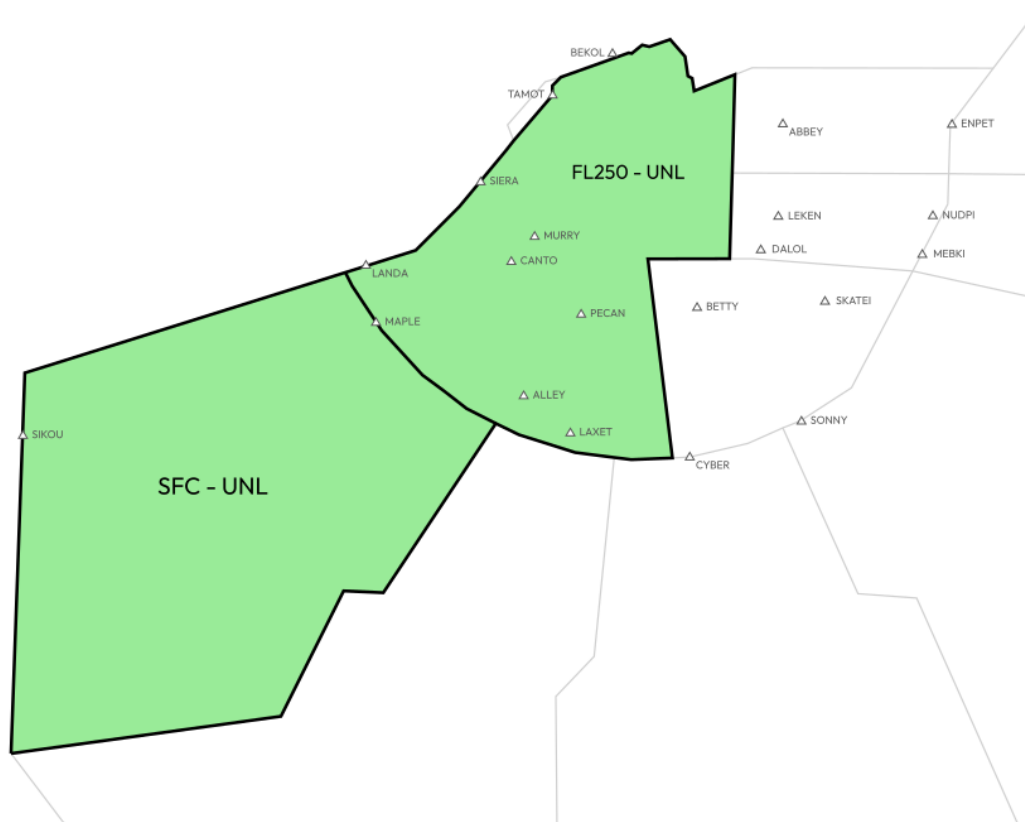
10.3.   Responsibilities
- Departures to SIKOU
- Arrivals from SIKOU and IKELA
- Transit Traffic to/from SIKOU
- Transit Traffic from SIERA

10.4.   General Procedures
- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TMW / MCU / Guangzhou / Sanya / Nanning / Zhanjiang

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10.5.   Handoff Agreements

From Guangzhou CTA to Area Radar West (TRW)

To	Altitude	Handoff Location
VHHX	FL280	TAMOT (note)
Hong Kong FIR	Metric Westbound RVSM FLs at or above S0840 (FL276)	TAMOT

Note: Lower altitudes may be used by coordination for direct handoff to Hong Kong Approach.

From Sanya CTA to Area Radar West (TRW)

From	Altitude	Handoff Location
ZJSY	S0810 (FL266), S0890 (FL291)	SIKOU
Sanya CTA (A202)	Metric Eastbound RVSM FLs at or above S1010 (FL331)	SIKOU

From Nanning CTA to Area Radar West (TRW)

From	Altitude	Handoff Location
ZJHK, ZJQH	S0630 (FL207)	SIKOU

From Zhanjiang TMA to Area Radar West (TRW)

From	Altitude	Handoff Location
Zhanjiang TMA	S0570 (FL187)	SIKOU

From Area Radar West (TRV) to Area Radar West (TRW)

To	Altitude	Handoff Location
ZGSZ, VHHH, VMMC	RFL	Sector Boundary

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From Terminal Departures Central (TDC) to Area Radar West (TRW)

From	Altitude	Handoff Location
ZGSZ, VHHH, VMMC (SIKOU)	↑ FL250	ALLEY (note)

Note: The agreed level for aircraft with a RFL below FL250 (e.g. those landing at airports near SIKOU) shall be individually coordinated.

From Area Radar West (TRW) to Guangzhou CTA

To	Altitude	Handoff Location
Guangzhou FIR	Metric Eastbound RVSM FLs at or above S0890 (FL291)	BEKOL (note)

Note: 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 Sanya FIR when initiating a handoff per this agreement.

From Area Radar West (TRW) to Sanya CTA

To	Altitude	Handoff Location
ZJSY	S0840 (FL276)	SIKOU (note)
Sanya CTA (A202)	Metric Westbound RVSM FLs at or above S0980 (FL321)	SIKOU (note)

Note: 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 Sanya FIR when initiating a handoff per this agreement.

From Area Radar West (TRW) to Nanning CTA

To	Altitude	Handoff Location
ZJHK, ZJQH	S0660 (FL217), S0720 (FL236)	SIKOU (note)
ZGNN, ZGBH	S0720 (FL236), S0780 (FL256)	SIKOU (note)

Note: 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 Sanya FIR when initiating a handoff per this agreement.

From Area Radar West (TRW) to Zhanjiang TMA

To	Altitude	Handoff Location
ZGZJ	S0600 (FL197)	SIKOU (note)

Note: 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 Sanya FIR when initiating a handoff per this agreement.

From Area Radar West (TRW) to Area Radar South (TRS)

From	Altitude	Handoff Location
ZGGG (to ELATO, ENVAR, NOMAN, SABNO)	↑ RFL	Sector Boundary

From Area Radar West (TRW) to Area Radar West (TRV)

From	Altitude	Handoff Location
ZGGG (to IDOSI, EPDOS)	↑ RFL	ALLEY

From Area Radar West (TRW) to Terminal Radar West (TMW)

To	Altitude	Handoff Location
VHHH	FL260	MAPLE

From Area Radar West (TRW) to Terminal Departures Central (TDC)

To	Altitude	Handoff Location
ZGGG	FL260	CHALI

From Area Radar West (TRW) to Macau Approach Radar (MCU)

To	Altitude	Handoff Location
VMMC, ZGSZ	FL120	COTON

11.   AREA RADAR WEST (TRV)

11.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- TRV -> TRW

11.2.   Area Radar West Sector
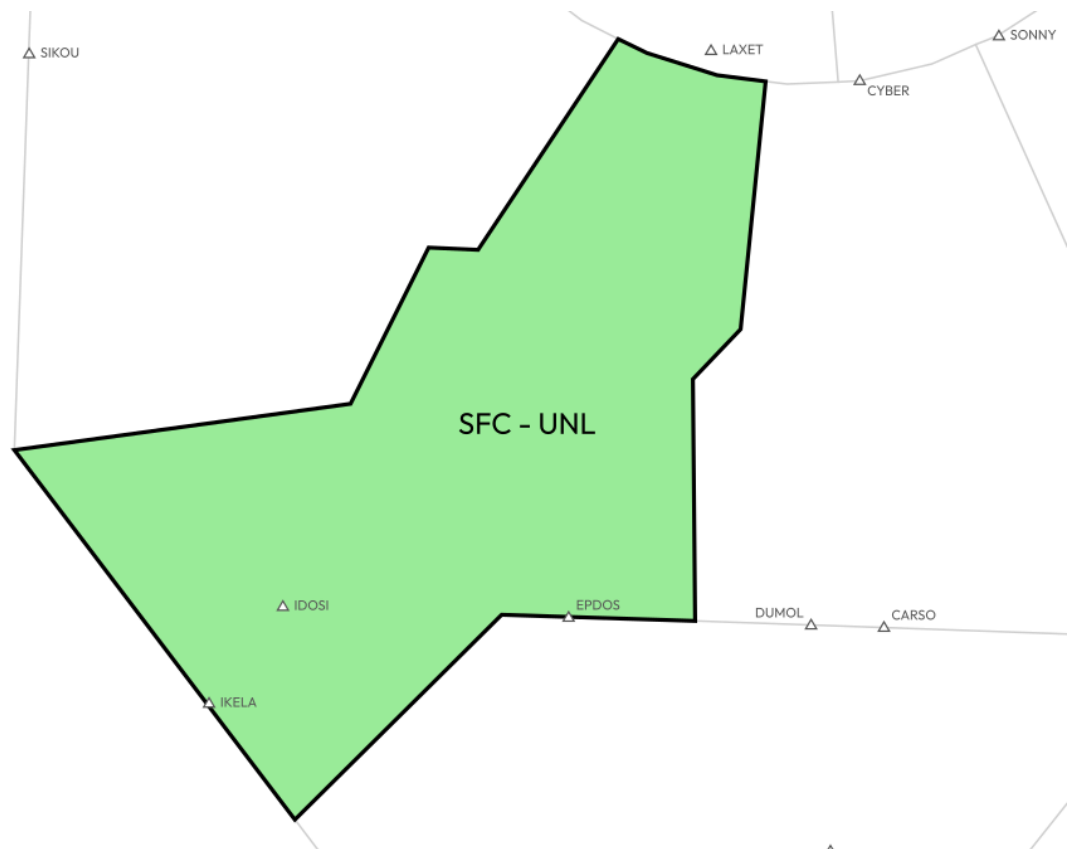
11.3.   Responsibilities
- Departures to IKELA and EPDOS
- Arrivals from IKELA
- Transit Traffic to/from IKELA

11.4.   General Procedures
- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TMW / MCU / Guangzhou / Sanya / Nanning / Zhanjiang

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11.5.   Handoff Agreements

From Sanya CTA Oceanic to Area Radar West (TRV)

From	Altitude	Handoff Location
Sanya CTA	Eastbound RVSM FLs	IKELA

From Terminal Departures Central (TDC) to Area Radar West (TRV)

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

Note: ZGSZ and VMMC departures will enter Terminal Radar South airspace. Coordination shall be performed with TMS to prevent conflicts with VHHH arrivals.

From Area Radar West (TRW) to Area Radar West (TRV)

From	Altitude	Handoff Location
ZGGG (to IDOSI, EPDOS)	↑ RFL	ALLEY

From Area Radar West (TRV) to Sanya CTA Oceanic

To	Altitude	Handoff Location
Sanya CTA (IKELA)	Westbound RVSM FLs	IKELA (note)

Note: 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 Sanya FIR when initiating a handoff per this agreement.

From Area Radar West (TRV) to Area Radar West (TRD)

To	Altitude	Handoff Location
Sanya CTA (EPDOS)	RFL	EPDOS

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From Area Radar West (TRV) to Area Radar Central (TRC)

To	Altitude	Handoff Location
ZGGG	RFL	Sector Boundary

From Area Radar West (TRV) to Area Radar West (TRW)

To	Altitude	Handoff Location
ZGSZ, VHHH, VMMC	RFL	Sector Boundary

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12. AREA RADAR WEST (TRD)

12.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- TRD -> TRV -> TRW

12.2. Area Radar West Sector
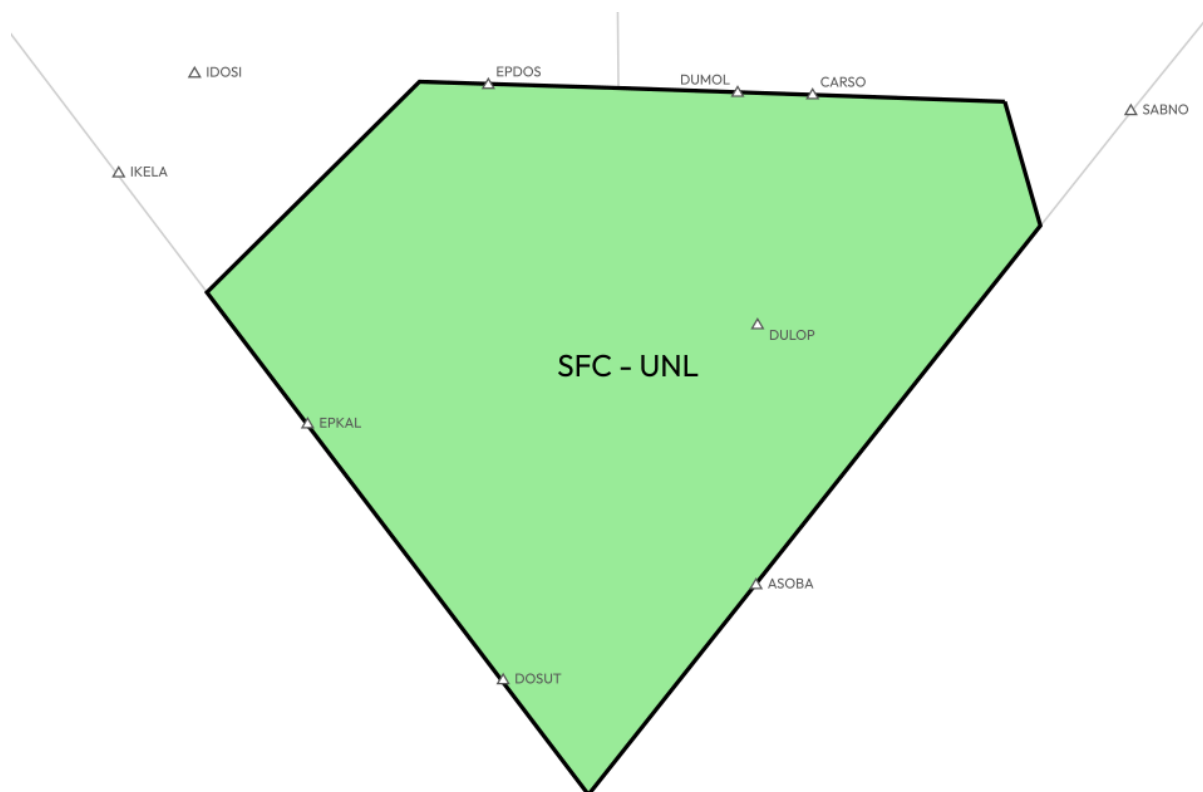
12.3. Responsibilities
- Departures to EPDOS (EPKAL)
- Arrivals from ASOBA/DOSUT
- Transit Traffic from ASOBA/DOSUT

12.4. General Procedures
- Separate aircraft and transfer to TRW / TRS / Sanya / Manila

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12.5.   Handoff Agreements

From Sanya Control (SYO) to Area Radar West (TRD)

From	Altitude	Handoff Location
Sanya CTA	FL270, FL310, FL320, FL350, FL360, FL390, FL400	DOSUT

From Manila FIR to Area Radar West (TRD)

From	Altitude	Handoff Location
Manila FIR	FL300, FL380	ASOBA

From Area Radar West (TRV) to Area Radar West (TRD)

To	Altitude	Handoff Location
Sanya CTA (EPKAL)	↑ RFL	EPDOS

From Area Radar West (TRD) to Sanya CTA Oceanic

To	Altitude	Handoff Location
Sanya CTA (EPKAL)	FL280, FL310, FL320, FL350, FL360, FL390, FL400	EPKAL (note)

Note: 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 Sanya FIR when initiating a handoff per this agreement.

From Area Radar West (TRD) to Area Radar Central (TRC)

To	Altitude	Handoff Location
VHHH	RFL	CARSO
ZGSZ, ZGGG, VMMC	RFL	DUMOL

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13. AREA RADAR UPPER (TRU)

13.1.   Airspace Ownership Priority (Positions on the left have priority over positions on the right)
- TRU -> TRW

13.2.   Area Radar Upper Sector

13.3.   Responsibilities
- High-level Traffic within Hong Kong FIR

13.4.   General Procedures
- Separate traffic in the higher levels. Where needed, coordinate with individual lower sectors for aircraft climbing / descending into lower airspace. Specific details on coordination with TRU may be found in SOP005.

13.5.   Handoff Agreements
13.5.1.   Refer to lower sectors.

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RECORD OF REVISION

DATE	REV.	REVISION CONTENT	APPROVAL
03 APR 2024	0	Initial Release	T. SIU
23 APR 2024	1	Updated agreements to align with SOP004 ANNEX I	T. SIU
09 JUN 2024	2	Updated agreed handoff levels to match VATPRC LOA Revision 1	T. SIU
05 OCT 2024	3	Updated Area Radar West sector naming Renamed Terminal Radar South Departures to Terminal Departures Central	T. SIU
28 NOV 2024	4	Removed most VHHX agreements Updated general procedures Updated handoff levels at NOMAN	T. SIU
08 APR 2025	5	Added missing agreements for ZGSZ & VMMC departures via TDE Added missing agreement for ZGSZ arrivals via ISBAN Removed duplicate agreements	T. SIU