

HK Helicopter Private Pilot leaflet

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November 17, 2013

1 Notes

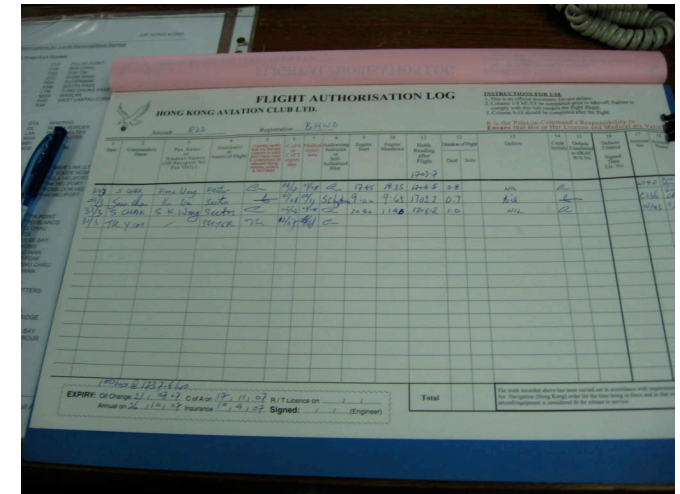
1.1 Limitations

Only VFR day is allowed. 在 sunset time 之後 30 分鐘前要著地。但 HKAC 會機要求在 sunset time 之前要著地。
Training/general flying: 800' ceiling, 3Km visibility
TIF/HKACC members: 1200' ceiling, 5Km visibility
(HFO GEN-08)

- Please brief your guests:-
 - max 3 guests per member are permitted to come to Sek Kong Air Base.
 - submit the list of the guest to Flight Ops by 1200 hrs on Wednesdays.
 - with your guests on board, calculate W&B for take off (refer to POH of your aircraft).
- Guest(s) should not walk out of the Flight Ops building unescorted.
- Guest(s) should not take photos within Sek Kong Air Base. Unauthorized photography in a Military Establishment is prohibited.
- Before the guest disembarks or approaches the aircraft, engine should be shut down and propeller should come to a stop.

1.2 Steps

- call 2711 5555 to book flight. 可以在 [heli booking](#), [FW booking](#) 查看一下 status (會員才可以 access 這個網頁).
- 如果取消 schedule, 要盡早通知, 否則可能會被罰款 HK\$600.
- Pilot, pax, luggage, fuel W&B
- 出發前要注意天氣情況, 包括:
 - METAR** (wind, visibility, cloud base, sunset time) www.weather.gov.hk, click "Aviation Weather Services", click "Weather Observations and Forecasts"
 - 各區風勢** www.weather.gov.hk, click "Other Weather Information", click "Regional Weather in HK", click "Weather Map", click "Mean wind"
 - Warning(s) in Force** click the home of www.weather.gov.hk, click "Warning(s) in Force" (in upper middle of the window)
 - 40Km range 3D weather radar image above HK** www.weather.gov.hk, click "Other Weather Information", click "Radar Imagery"
 - 64Km range 2D weather radar image above HK**
 - 256Km range 2D weather radar image above HK**
- read **NOTAM** for vhhh
- 到場後視察當時天氣情況, 雲是否太低、風是否太大、視野是否清晰?
- 取墊褥 (如有需要)。
- preflight check
- fax flight plan
- 填簿 (flight authorization log book):
 - use capital letters
 - in col 3, write all pax names
 - dates in DD/MM/YY
 - do not over write/deface the entry, with a pen-stroke cancel it and put your initial
 - to cancel entire line, use a straight edge to draw a st. line across, write EIE (enter in error)



填 col. 1-4, 到自己可以 solo, 才可以 sign col. 5-7 到自己夠鐘數, 才可以 sign col. 8 其餘部份, 落地才簽。

- 飛...
- 飛完回來後, 入油, 填簿。

1.3 Fixed wing airplane

1.3.1 HKAC fleet

B-HSB	160 hp Slingsby Firefly
B-HHF	Cessna 182, The workhorse for the para club when Shek Kong was its home. It has been refitted for general flight training.
B-HPL	Cessna 172R
B-HIG	Cessna 172N
B-HRH	Cessna 172P, affectionately known as "Her Royal Highness"
B-HHN	Cessna 152
B-HHP	Cessna 152 Aerobat

1.3.2 Pre-flight

1. If oil level is low, please top it up according to POH; fill the oil record sheet (it is kept in the front seat of the fuel bowser). The engineer checks oil consumption, unusual higher consumption will be investigated and rectified.
2. C-152 BHHN has long range tanks. Members are to ensure not to fill full tanks. With full fuel in the tanks, aircraft becomes heavier - BHHN climb performance is reduced. With BHHN, each tank should be filled with 13 US gls (bottom of the filler cap).

Airspace	Levels	Cl
Within 50nm of CH DME (excluding airspace within and above HK CTR and UCARAs)	$\frac{UNL}{8,000ft}$	A
	$\frac{8000ft}{2,000ft}$	C
	$\frac{2000ft}{SFC}$	G ¹
	$\frac{UNL}{8,000ft}$	A
Exceeding 50 NM from CH DME but within Hong Kong TMA	$\frac{8,000ft}{8,000ft}$	G ¹
	$\frac{SFC}{UNL}$	A
Above Hong Kong CTR	$\frac{9,000ft}{S,C}$	A
Hong Kong CTR	$\frac{9000ft}{S,C}$	C
Above UCARAs	$\frac{UNL}{9,000ft}$	A
	$\frac{9000ft}{UCARAs'lim}$	C
UCARAs	$\frac{UCARAs'lim}{S,C}$	G ¹
Airspace south of Hong Kong TMA	$\frac{UNL}{8,000ft}$	A
	$\frac{8,000ft}{8000ft}$	G ²
	$\frac{S,C}{S,C}$	

¹2-way communication required

²2-way communication not required South of HK TMA

³See ENR 2.1 for lateral limits of airspace.

在香港，主要劃分為兩大區 (詳情請看 HM100LFC)，西南方大致是 CTR (control zone)，東北方大致是 UCARA (UnControlled Airspace Reporting Area)。I don't know the classification of airspace in Hong Kong, just remember not to fly above the altitude as shown in the brackets.

CTR 分為三個主區：

- SKARA Shek Kong Aerodrome Reporting Area (surface to 2,000ft)
- ATZ Aerodrome Traffic Zone (surface to 2,000ft)
- Control Zone (CTR):
 - Waglan 灣 (surface to 2,000ft)
 - Tuen Mun Zone (surface to 2,000ft)
 - Ma Wan Zone (surface to 2,000ft) (Gold coast corridor < 500ft AMSL)
 - Lantau Zone (surface to 2,000ft) (West Lantau corridor < 500ft)
 - Island Zone (surface to 2,000ft)
 - Delta Zone (surface to 2,000ft)
 - South Outer Zone (surface to 2,000ft)

UCARA:

- North Border (surface to 1,000ft)
- New Town (surface to 2,000ft)
- Tolo 吐露 (surface to 3,000ft)
- MIRS Bay 大鵬灣 (surface to 3,000ft)
- Port Shelter 牛尾海 (surface to 2,000ft)
- Ninepins (surface to 2,000ft)

持有外國牌，完成 check-out，而尚未獲準 self-authorize 的人；或持有本地牌，而尚未獲準 self-authorize 的人，可不可以飛 north border, south outer, delta, Ma Wan? 飛行圖，在 [地政總署測繪處](#) 購買，你可從 [銷售處](#) 找最方便你的售賣地點；雖然他們有列出某些郵局有地圖賣，但飛行圖比較少人買，所以郵局未必有得賣。這裏用的飛行圖，一般很少改版。

HM100LFC 係 1:100,000 的本地飛行全圖，一張賣 HK\$70; HM50HFC 係 1:50,000 的直升機用飛行圖，一套兩張賣 HK\$110.

1.4 Helicopter

Governor in R22 always ON, even practising autorotation. Note: practising autorotation is only permitted with instructor.

Scales of the maps:

US Terminal chart	250,000
US Heli chart	125,000
HK Aviation map	100,000
HK Heli map	50,000

2 Airspace

(HK AIP ENR 1.4)

2.1 Elevations

Kai Tak: 13ft.

Shek Kong: 50ft.

3 Radio

很多人，包括我自己，在用 radio 時都會心急，一按下去便講，transceiver 會 pick up 唔倒開頭的一小段，導致 communication problem, 所以要習慣按下半秒才講野。

3.1 Freq

Zone Control	120.6MHz
ATIS	128.2MHz
Hong Kong Information	122.4MHz
Shek Kong Traffic	123.6MHz

3.2 Kai Tak RT procedure

120.6MHz for Zone Control.

Pilot	Zone control, WE, 2 POB, Kai Tak lift off. <i>or</i> Zone control, WE, Kai Tak 2 POB, request lift off for LYM.
ATC	Helicopter WE, cleared for take off Kai Tak for LYM. QNH 1016, Squawk 5271. Traffic a twin Squirrel helicopter from Peninsula to East Pass 控制塔每個人的 practice 都唔同, 有D可能會拆開黎答你; 又可能會要求你 report airborne, report LYM 之類。
Pilot	WE, QNH 1016, Squawk 5271. Copied traffic. 或者答: WE, cleared for LYM, QNH 1016, Squawk 5271. Copied traffic.

At Waglan outbound

Pilot	Zone Control, WE, approaching port shelter, changing frequency. Zone Control, WE, Waglan, changing frequency.
ATC	WE, Change to HK Information 122 decimal 4.
Pilot	122 decimal 4, WE.

122.4MHz HK Information

Pilot	Hong Kong Information, WE, Port Shelter
ATC	WE, A Robinson operating in Port Shelter / No traffic in Port Shelter.
Pilot	Copied traffic / traffic visual / copy no traffic, WE. (US: Looking for traffic / traffic in sight, WE)

Every 20 minutes

Pilot	Hong Kong Information, Helicopter WE, Ops Normal in Port Shelter.
ATC	Next Ops Normal call time at 45 / on the hour / on next hour.
Pilot	Roger. Call you at 45 / on the hour / on next hour.

Before LYM inbound

Pilot	Hong Kong Information, WE, approaching Junk Bay, changing frequency.
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120.6MHz Zone Control

Pilot	Zone control, WE, approaching Junk Bay for LYM for Kai Tak to land.
ATC	Clear to Kai Tak.

自從 2009-5-1 KTK 意外之後, 我地要做 wind check:

Pilot	Zone control, WE, request 1 minute frequency switch.
ATC	Frequency change approved.

Switch to 131.25MHz

Pilot	Flight ops, this is helicopter WE, wind check please.
Flt ops	Wind 5 knots.
Pilot	Wind 5 knots, WE.

Switch back to 120.60MHz

At 400 ft, 1Km from Kai Tak

Pilot	Zone Control, WE, Kai Tak. Zone Control, WE, Kai Tak, close SAR, thanks, have a good day.
ATC	...

或者:

Pilot	Zone Control, Helicopter WE, landed Kai Tak.
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Other examples,

- The HK info closed after 17:00, when you're in UCARA, your radio call would be like: **Hong Kong Information, all stations, WE, Waglan** and you should not expect response.
有時你五點前起飛佢會提你五點後 make blind call.
- When you leave LYM after 17:00, the Zone Control may ask when will you come back, if you will be back at 18:20, you can say: **20 next hour local, WE**
- 留意, 有時控制塔會叫你唔好飛高過 1,500ft.

3.3 Harbour

在啟德起飛後, 要留意有冇 RC model plane(s), 要避開佢, 爬到 > 500ft 才開始右轉去 harbour, 保持 1,000ft.

If the Zone Control tells you to "hold Jordon", then you need to hold above 油麻地避風塘; 讓信德的直昇機完成操作後, 佢會叫你 resume. 記住在避風塘上空 holding, 唔好飛入陸地範圍。

如果你要帶 short tour, 來回 harbour 幾次, 每次 15 min., 在 flight plan 的 remark 上寫:

Flight details repeat 3 times after pax changes in KTK.

然後在 green island 前 call: Zone Control, JN, (approaching) green island, (ready to) backtracking (*or* backtrack to Kai Tak).

又或者在昂船洲附近 (唔好飛埋去) call: Zone Control, JN, StoneCutters, backtracking. *or* Zone Control, JN, West Kowloon Helipad, backtracking. 在回到 Kai Tak 400ft, call: Zone Control, JN, Kai Tak, will call you again in 10 min. after changing pax and airborne.

停定後, 我會 shutdown engine, change pax, startup, hover, call: Zone Control, JN, 2 POB, Kai Tak lift off.

3.4 VHSK RT procedure

123.6 VHSK (Area C to Grass)

Pilot	Shek Kong Traffic / Flight Op, Helicopter WE, Area C, Radio check.
F.O.	WE, Flight Op, reading 5.
Pilot	Thank you, Reading 5 too, WE.
Pilot	Shek Kong Traffic, Heli WE, Hover taxi within.
Pilot	Shek Kong Traffic, Heli WE, Holding short active Rwy, any A/C in the circuit, please ident.
HN	HN downwind rwy 11 for touch and go.
Pilot	Copied traffic. Heli WE entering Rwy and backtrack to the grass.
Pilot	(on the grass) Heli WE rwy vacated.

VHSK (Grass to Rwy 11)

Pilot	Shek Kong Traffic, Heli WE entering rwy 11 after departing traffic / HN.
Pilot	Shek Kong Traffic, Heli WE lining up rwy 11.
Pilot	Shek Kong Traffic, Heli WE rolling rwy 11.

VHSK (in the circuit / US- Pattern)

Pilot	Shek Kong Traffic, Heli WE right downwind Rwy 11 for the grass.
Pilot	Shek Kong Traffic, Heli WE, right base Rwy 11 for the grass.

When a fixed wing is on turning final / on final (make right orbit / US- make right turn 360) and call:

Pilot	Shek Kong Traffic, Heli WE, right orbit at right base Rwy 11 for traffic sequencing. or Shek Kong Traffic, Heli WE, holding at right down wind Rwy 11 for traffic sequencing.
Pilot	(When cleared) Shek Kong Traffic, Heli WE, final Rwy 11 for the Grass.
Pilot	Shek Kong Traffic, Heli WE operating on Grass.
Pilot	Shek Kong Traffic, Heli WE, entering Rwy 11 and hover taxi to Area C.
Pilot	Shek Kong Traffic, Heli WE, Rwy vacated.

VHSK to Kadoorie Gap and New Town

Pilot	Shek Kong Traffic, Heli WE, Rolling Rwy 11 for Kadoorie Gap.
Pilot	(Approaching KDG) Shek Kong Traffic, Heli WE, KDG, Changing to HK Information 122.4.

122.4

Pilot	HK Info, Heli WE, Good Morning, KDG, 2 POB, New Town 1000 feet.
ATC	Heli WE, HK Info, Good Morning, QNH, 1011, 2 Cessna traffic in New Town.
Pilot	Copied traffic, QNH 1011, WE.

122.4 Rejoin VHSK from Kadoorie Gap

Pilot	HK Info, Heli WE, KDG changing to Shek Kong.
ATC	WE, Flight details terminated at 1120 good-bye.

123.6

Pilot	Shek Kong Traffic, Heli WE, KDG 2,000ft inbound to rejoin.
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Other traffic: HN downwind rwy 11 for touch and go / etc.

Pilot	Copied traffic.
Pilot	(When overhead rwy) Shek Kong Traffic, Heli WE, overhead rwy 2000 feet, all traffic visual, descend to circuit height (US- Pattern altitude).
Pilot	Shek Kong Traffic, Heli WE, right downwind rwy 11 for the grass.
Pilot	Shek Kong Traffic, Heli WE, right base rwy 11 for the grass.
Pilot	Shek Kong Traffic, Heli WE, final rwy 11 for the grass.

3.5 Shutdown for a while

When riding helicopter to somewhere, you want to take a break, you can make the following call: HK Information, JN, Tolo, will shutdown for three zero minutes, call you again after airborne.

3.6 Transponder

There are 3 PSRs paired with SSRs for the ATC in HK:

1. Approach Surveillance Radar at Sha Chau, cover 64nm (short range)
2. Terminal Area Radar at Tai Mo Shan, cover 140nm (medium range)
3. Route Surveillance Radar at Mount Parker, cover 200nm (long range)

There is a backup SSR at Beacon Hill.

4 Procedures

4.1 Take off

From Kai Tak, whenever possible, use Max Perf. TO. Otherwise, at 5 - 10 ft. above ground, accelerate the helicopter, when it comes to ETL, rotate to fly over the obstacle. Leaving LYM at 1,000 ft; return at 1,500ft. 啟德係一個 confined area, 要非常小心, 由於四邊有 fence, 所以 take off 一定要飛越佢, 如果因任何原因不能飛越, 要早D 決定停低, 並要小心撞倒其他東西。一般來說, 起飛方向係 SE direction, 但如果係 strong tail wind, 上升動力唔夠, 咁就要 take alternate route, NE direction 飛越 obstable 之後盡快 (唔好飛越馬路) 右轉向 SE.

回程時, 在跑道頭開始下降, 要在跑道尾之前到達 400 ft; 如果遇上 strong tail wind, 可能要加大 descent rate.

4.2 Landing

In Hong Kong, you mostly need to do confined area landing. Some area (like Kai Tak) does not allow "go around".

4.2.1 Prelanding

HASEL check

Power check in-flight

Max power available (MPA)

MPA = MCP - The cruising power at 53 Knots

MPA > 7", vertical takeoff possible

MPA = 6", OGE hover possible, MPTO (30 Kts attitude)

MPA = 5", IGE hover possible, normal takeoff

MPA = 4", 0 speed landing, cushion takeoff

MPA ≤ 3", run on landing is necessary

MPA = 3", running takeoff (touching ground)

MPA < 3", you will not be able to take off after landing !

Power check IGE (nil wind conditions)

MPA = MCP - Hovering power at nil wind

MPA $< \frac{1}{2}$ " manifold pressure, running take off is necessary.

MPA = $\frac{1}{2}$ " manifold pressure, cushion creep takeoff can be achieved.

MPA = $1 - 1\frac{1}{2}$ " of manifold pressure, towering takeoff can be achieved.

MPA = > 2 " manifold pressure, vertical climb OGE can be achieved.

SWAT check (High Level Reccy check at > 500 ft)

Size, Shape, Surface, Slope, Surrounding;

Wire, Wind;

Approach/go around, animal;

Terminate.

Size

Not only the size to land the helicopter, but also consider the helicopter performance and approach.

Shape

Long shape may be good for running landing, normal approach, but also need to consider the wind direction.

Surface

Land on long grass can make the hot engine get in touch with the grass and induce fire.

Avoid to land on loose sand surface.

Slope

See [landing](#).

Surrounding Besides to observe the potential hazard in the surrounding, also observe how it affect the helicopter performance, say, an large concrete wall can affect the air flow and reduce the performance.

The surrounding also affect your approach, say, the size of the area is big, but if it is surrounded by fencing, probably you cannot approach by running landing.

Consider not to fly over surrounding houses when plan your approach.

Wire

Wire can cause illusion and make you hard to judge the actual wire distance from you. Never fly over wire even you can see it, always fly over the pole. Beware, wire

on either side of a pole can go up, not necessarily going down.

Wind

Wind is hard to tell, clues are smoke, water surface waves.

Approach/go around, animal

Make references for the approach pattern, and fly the pattern.

Terminate

You need to plan your approach: upwind, cross wind, downwind and base leg. You need to tell your pax the Termination point where you will go around when necessary.

4.2.2 Landing

Every landing is a slope landing. The R22 tends to tilt towards the pilot's LHS (left skid lower), its common to see slipping to RHS after touch down, beware to apply a bit left cyclic after touch down.

When pick up the helicopter, beware the grass may wrap one of the skid, the mud may stick one of the skid to the ground.

While picking up a R22, it tends to move to the right and forth.

4.3 Shek Kong

Only instructor can park on the heli-pad in the area C. For others, please part on somewhere else, e.g., the T markers.

4.4 Circuit in Shek Kong

When flying helicopter in Shek Kong, when you (as heli PIC) attempt to enter rwy or right base, and you heard the fixed-wing (FW) announced they are in left base or final, then you need to hold.

5 Flying Orders

By signing In and Out in the Flight Authorisation Log, the pilot acknowledges

- holds a valid license
- had read and understand the **NOTAM**
- had check all notices on the notice board in HKAC
- had read and understand the flying order

5.1 Annual Flight Review (AFR)

Pilots must have been checked out by 1 of the Club's flying instructors $<$ the past 12 months. Process includes:

1. Review of:
 - Air Law
 - AIP HK
 - Helicopter General Flying Orders
 - Aircraft Pilot's Operating Handbook
2. Pass a HKAC open book written test paper.
3. Flight check to include the following as a minimum:
 - Pre-flight brief
 - Departure and return
 - Circuit
 - Hovering (including axial turns)
 - Emergency procedures, including autorotation
 - Radio procedures
4. A stamp in the pilot's logbook.

5.2 Flying Recency

Pilots are to ensure they have operated that type for at least 1.0 hour as PIC, to include at least 3 approaches, within the following time limits:

Non-Self Authorised Pilots	45 days
Self Authorised Pilots	60 days
Instructors	90 days

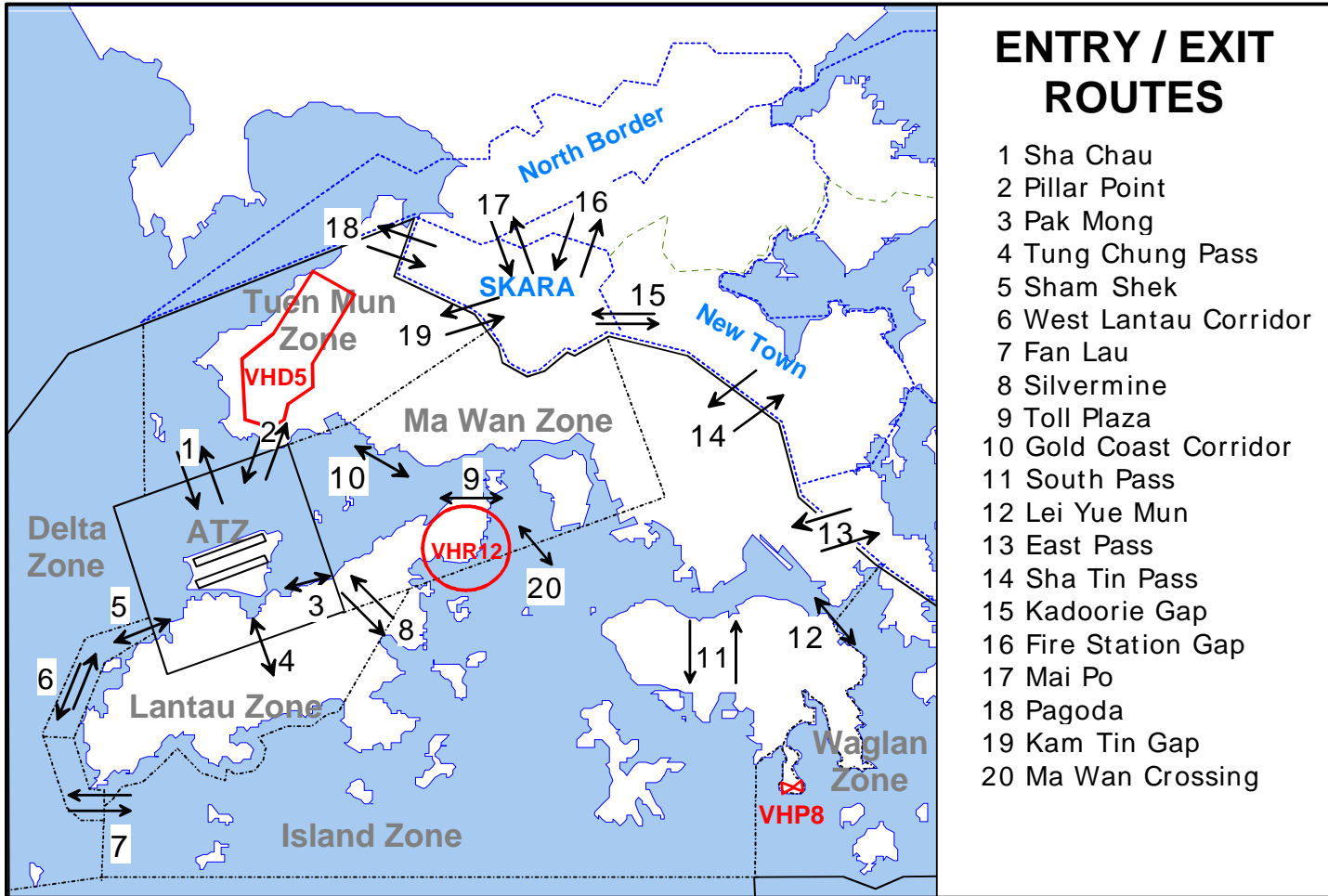
Renewal of expired Flying Recency is the same as an AFR and will be accepted as an AFR if stamped in the logbook.

5.3 Kai Tak / Shek Kong Recency

Pilots are to ensure that they have operated out of Kai Tak or Shek Kong within the time periods set out in Fly-

ing Recency above. Expired recency may be renewed by flight check with an instructor out of the relevant base.

6 Flight plan

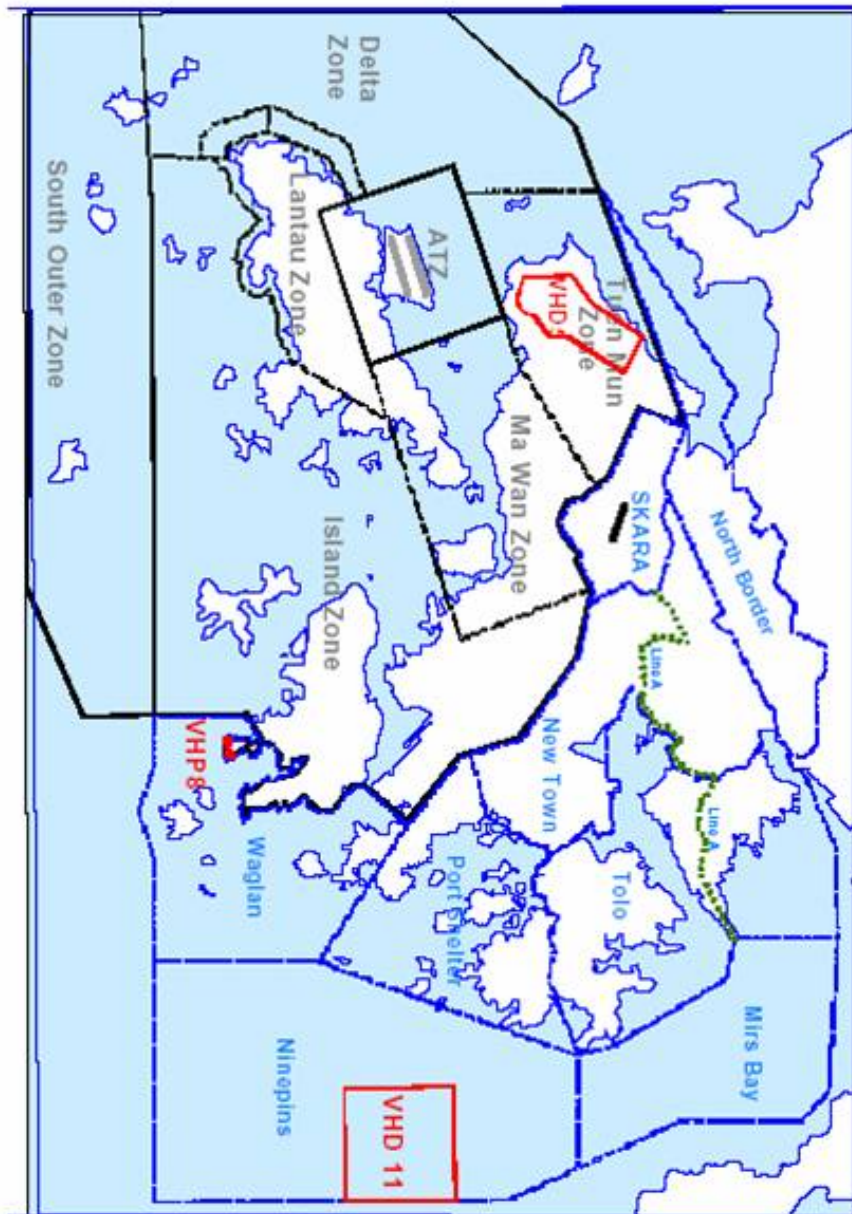


ENTRY / EXIT ROUTES

- 1 Sha Chau
- 2 Pillar Point
- 3 Pak Mong
- 4 Tung Chung Pass
- 5 Sham Shek
- 6 West Lantau Corridor
- 7 Fan Lau
- 8 Silvermine
- 9 Toll Plaza
- 10 Gold Coast Corridor
- 11 South Pass
- 12 Lei Yue Mun
- 13 East Pass
- 14 Sha Tin Pass
- 15 Kadoorie Gap
- 16 Fire Station Gap
- 17 Mai Po
- 18 Pagoda
- 19 Kam Tin Gap
- 20 Ma Wan Crossing

Entry / Exit Routes from ATZ, CTR Zones and SKARA

- 10 Gold Coast corridor, < 500ft
- 12 LYM 1500ft IN (enter KTK)
- 12 LYM 1000ft OUT
- HBR 1000ft IN/OUT
- 15 KDG 2000ft IN (enter VHSK)
- 15 KDG 1500ft OUT
- 16 NOT for helicopter
- 17 NOT for helicopter
- 18 NOT for helicopter
- 19 KAM 1000ft IN
- 19 KAM 1000ft OUT



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AIP HONG KONG

Abbreviations for Local Geographical Names

1 ATZ, CTR and SKARA Entry/Exit Routes

EAST PASS	ESP	PILLAR POINT	PPT
FANLAU	FAN	SHA CHAU	SHC
FIRE STATION GAP	FSG	SHA TIN	STP
GOLD COAST CORRIDOR	GCC	SHAM SHEK	SSK
KADOORIE GAP	KDG	SILVERMINE	SIL
KAM TIN GAP	KAM	SOUTH PASS	SOP
LEI YUE MUN	LYM	TUNG CHUNG PASS	TCP
MA WAN CROSSING	MWX	WAGLAN	WAG
PAGODA	PAG	WEST LANTAU CORRIDOR	WLC
PAK MONG	PAK		

2 UCARAs and CTRs

DELTA	DTA	NINEPINS	9PN
ISLAND	ISL	NORTH BORDER	NBD
LANTAU	LAN	PORT SHELTER	PSH
MA WAN	MAW	SOUTH OUTER	SOU
MIRS BAY	MBY	TOLO	TOL
NEW TOWN	NEW	TUEN MUN	TUM

3 Helicopter Landing Sites

BUSINESS AVIATION CENTRE	BAC	MICROWAVE LINK (LT27)	MIC
EAST LANTAU RADAR (LT20)	ELR	PAMELA YOUDE HOSPITAL	PYH
GFS DISPERSAL	GFS	PENINSULA HELIPORT	PEN
KADOORIE BASE	KAD	SHUNTAK HELIPORT	VHST
KAI TAK	KTK	WEST KOWLOON HELIPORT	WKH
LANTAU NEI LAK SHAN (LT07)	LT7	WANCHAI HELIPORT	WAN

4 Others

BLACK POINT	BPT	NORTH POINT	NPT
BROTHERS POINT	BRP	PEDRO BLANCO	PDB
BUDDHA	BUD	PENG CHAU	PCH
CASTLE PEAK	CPK	PO TOI	PTO
CHEUNG CHAU	CCC	REPULSE BAY	REP
CHI MA WAN	CMW	SEK KONG	VHSK
DEEP BAY	DPB	SHA LO WAN	SLW
DISCOVERY BAY	DBY	SHARP PEAK	SPK
DISNEYLAND	DNL	SHEK KWU CHAU	SKC
GREEN ISLAND	GRI	SIU SAI WAN	SSW
HEI LING CHAU	HLC	SOKO	SOK
HONG KONG SOUTH	HKS	STANLEY	STL
JUNK BAY	JBY	STONECUTTERS	SCU
KAU YI CHAU	KYC	TAI LAM	TLM
KOWLOON PEAK	KLP	TAI O	TIO
KWAI CHUNG	KWC	TOLL PLAZA	TPZ
LAMMA	LMM	TSING MA BRIDGE	TMB
LEAD MINE PASS	LMP	TSING YI	TYI
LION ROCK	LNR	TUNG CHUNG BAY	TCB
LUNG KWU CHAU	LKC	VICTORIA HARBOUR	HBR
MUI WO	MWO	VICTORIA PEAK	VPK
NORTH LANTAU EXPRESSWAY	NLE	YAM O	YMO