

Business Helicopter - TIM and LTO Record

Table 1: Specifications and Times in mode of BAC Helicopter (for mixing height of 3000ft/914.4m)

Aircraft	Engine	Number of Engines	Time in mode (min) ^[1]			
			Approach	Taxi-in	Taxi-out	Take off
Eurocopter AS355N Twin Squirrel	ARRIUS 1A	2	5.50	2.00	2.00	3.00

Note:

[1] The time-in-mode of Approach and Take-off is made reference to FOCA's Guidance on the Determination of Helicopter Emissions when the cruising height is 3000 ft.

The time-in-mode will be adjusted based on the mixing height and cruising height of Hong Kong.

The time-in-mode of Taxi-in and Taxi-out is made reference to GFS normal practice for take-off and approach

Table 2: Correction of the Time-in-mode in relation to the Mixing Height

	Mixing Height > Cruising Height (min) ^[2]	Cruising Height > Mixing Height (min) ^[2]
Approach	$5.50 \times (152.4 / 914.4)$	$5.50 \times (\text{Mixing Height} / 914.4)$
Taxi-in	2.00	2.00
Taxi-out	2.00	2.00
Take off ^[3]	$(3.00 \times (152.4 / 914.4)) + 1$	$(3.00 \times (\text{Mixing Height} / 914.4)) + 1$
Cruising (For Peninsula Hotel - HKIA) ^{[4][5][6]}	2.21	0.00
Cruising (For Macau - HKIA) ^{[4][5][6]}	1.84	0.00

Note:

[2] The Cruising Height of Helicopter is assumed as 500ft (152.4m) based on the Hong Kong Helicopter Flight Route provided by GFS

[3] 1-minute hovering time is added into take-off mode

[4] The emission of cruising is considered only if the mixing height is higher than the cruising height

[5] No cruising speed of BAC helicopter is available. The cruising speed is made reference to GFS Helicopter (61.7 m/s) for time-in-mode calculation

[6] The average cruising distance of Macau-Hong Kong Helicopter is 6805m within 5 km assessment area and the average cruising distance of Peninsula Hotel-HKIA Helicopter is 8180m within 5km of the study boundary.

Table 3: LTO of BAC Helicopter

Month	Number of LTO per month ^[7]	
	Peninsula Hotel - HKIA	Macau - HKIA
Jan-2031	2	2
Feb-2031	2	2
Mar-2031	2	2
Apr-2031	2	2
May-2031	2	2
Jun-2031	2	2
Jul-2031	2	2
Aug-2031	2	2
Sep-2031	2	2
Oct-2031	2	2
Nov-2031	2	2
Dec-2031	2	2

Note:

[7] BAC mentioned that the total helicopter LTO is 2-3 per month in Year 2011 and there is a decreasing trend of helicopter LTO. Therefore, 2 LTOs for each helicopter routes per month is assumed for conservative analysis.