

CHAPTER 4 —

# Managing Aircraft Noise



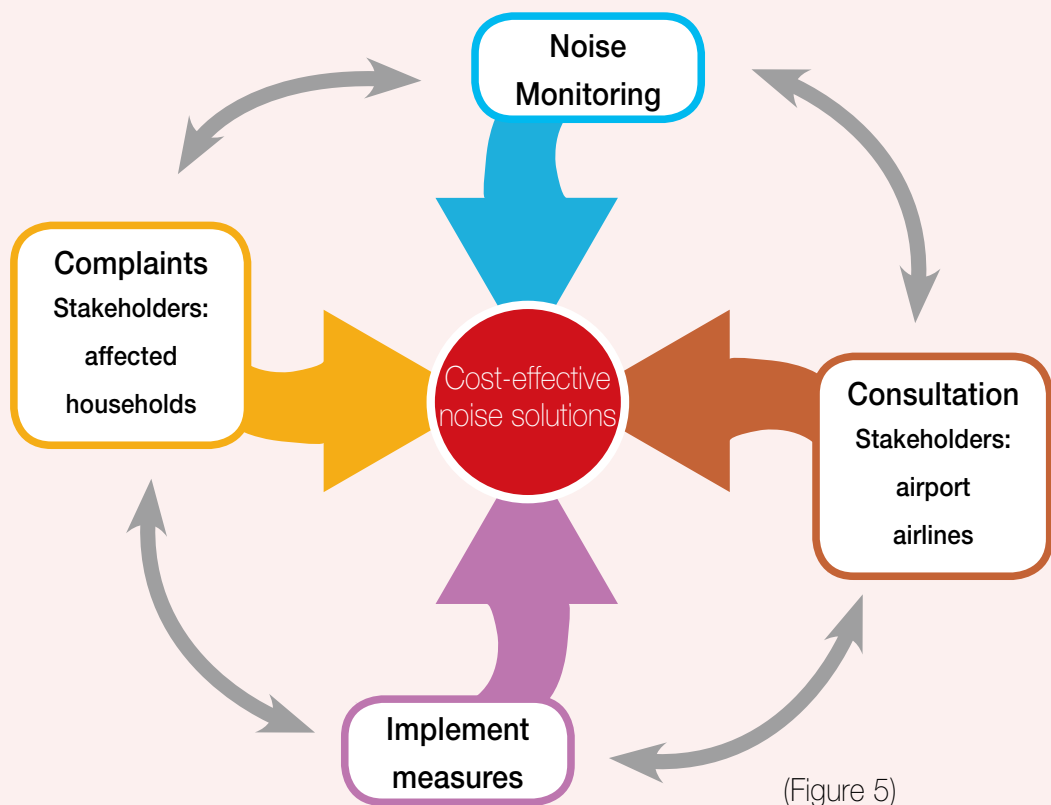
# CHAPTER 4 —

## Managing Aircraft Noise

When managing Aircraft Noise impacts, we balance the needs of various stakeholders, including affected households and the aviation industry. This process of liaison is illustrated in the diagram below (Figure 5).

As shown in the diagram, we would implement noise-mitigating measures wherever possible. We also closely monitor aircraft noise and handle the complaints from affected households. We strive to achieve cost-effective solutions to the aircraft noise problem with the consultation of the airport and different airlines.

In addition, we disseminate relevant noise data and keep an eye on the aviation technological developments with a view to introducing new practices on aircraft noise reduction.



## Using Flight Paths Over Water to Minimise Noise

To keep aircraft noise impacts to populated areas to an absolute minimum in the night-time hours, so long as weather and flight conditions allow, we require arriving aircraft to approach the airport from the southwest, so that they approach over water, and depart via the West Lamma Channel.

In 2007, we targeted for 90% of all aircraft arriving between midnight and 7:00am to approach from the southwest.

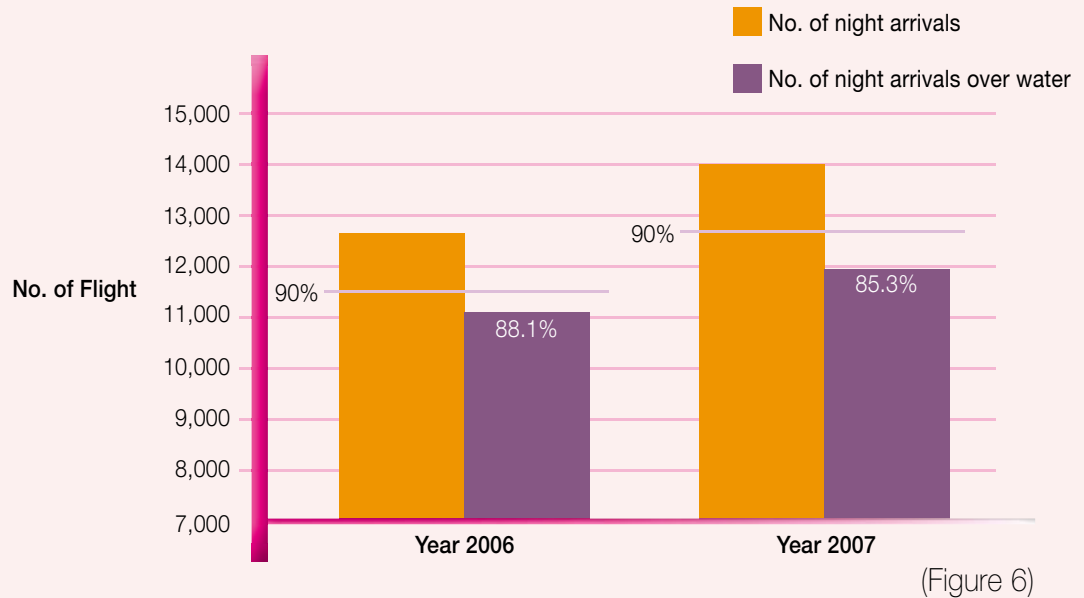


In the same period, we targeted for 95% of all aircraft taking-off between 11:00pm and 7:00am to depart via the West Lamma Channel.

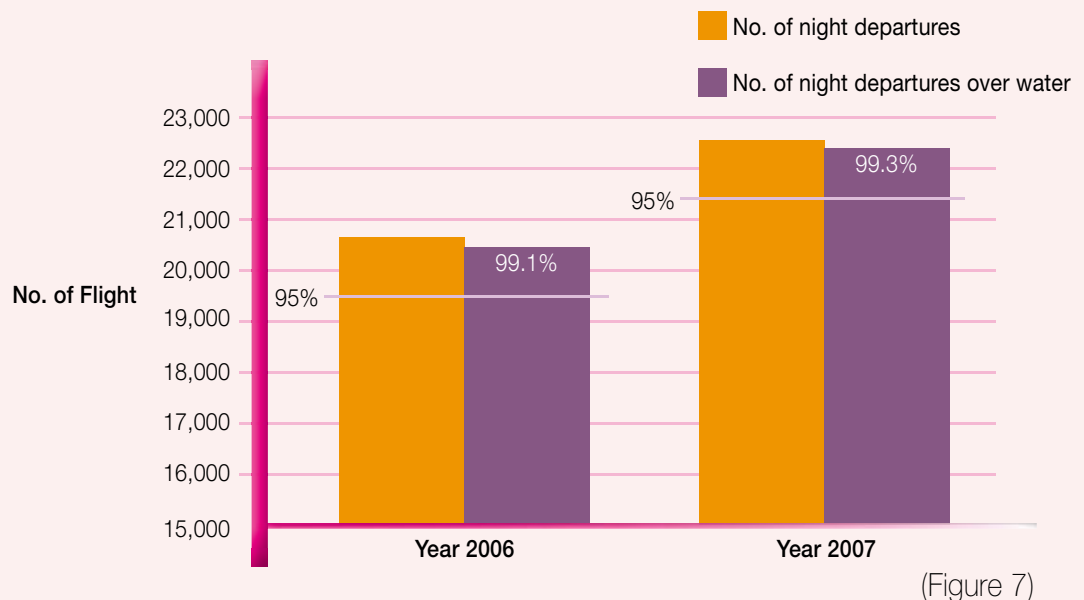
These two arrangements ensure that during the overnight period, populated areas such as Sha Tin, Tsuen Wan, Kwai Chung, Tsing Yi, Sham Tseng and Tsing Lung Tau are not affected by noise from arriving aircraft, while districts like Kowloon, North Point, Shau Kei Wan and Chai Wan are not affected by noise from departing aircraft.

## Our Performance in 2007

Statistical data shows that in 2007, 85.3%(2006, 88.1%) of all night arrivals were able to land from the southwest. (Figure 6)



We achieved more success with night departures. In 2007, 99.3% (2006, 99.1%) of all night departures were via the West Lamma Channel (Figure 7).



## Target for 2008

In 2008, we will retain the aforementioned 90% and 95% targets respectively for night arrivals and departures over water.

## Quieter Arrivals

When weather and flight conditions require night arrivals between 11:00pm and 7:00am to approach from the northeast, we encourage aircraft to adopt the Continuous Descent Approach (CDA). By this procedure, aircraft would fly higher, adopt a lower power and drag configuration as they begin their approach, thus minimising the night-time aircraft noise impacts on areas such as Sai Kung, Tseung Kwan O and Ma On Shan.

### **Our Performance in 2007**

In 2007, 82.8 % of aircraft approaching from the northeast between 11:00pm and 7:00am attained CDA procedures.

### **Target for 2008**

In 2008, we will continue to encourage the use of the CDA procedure.

## Quieter Departures

All aircraft departing to the northeast are required to use Noise Abatement Departure Procedures (NADP) as long as safe flight operations permit.

Prescribed by the International Civil Aviation Organization (ICAO)\*, these procedures require aircraft to commence engine power reduction in the initial phase of take-off at heights as low as 800 feet. This reduces the noise impact on affected households in the vicinity of the airport when aircraft are required to depart to the northeast.

### **Target for 2008**

Airlines are to continue to adopt the NADP for departures to the northeast of the airport.

Note : \* The International Civil Aviation Organization (ICAO) is a specialised agency of the United Nations. ICAO was created in 1944 to promote the safe and orderly development of international civil aviation throughout the world. It sets standards and regulations necessary for aviation safety, security, efficiency and regularity, as well as for aviation environmental protection. The Organization serves as the forum for cooperation in all fields of civil aviation among its 190 Contracting States.

# Keeping Noisy Aircraft Out of Hong Kong

Since 1 July 2002, old and noisy "Chapter 2" (#1) aircraft types that create serious noise pollution have been banned from using Hong Kong International Airport. Only newer and quieter "Chapter 3" (#2) aircraft are allowed to land in Hong Kong.

## Target for 2008

To protect residents from unnecessary aircraft noise, the ban on Chapter 2 aircraft will remain in place.

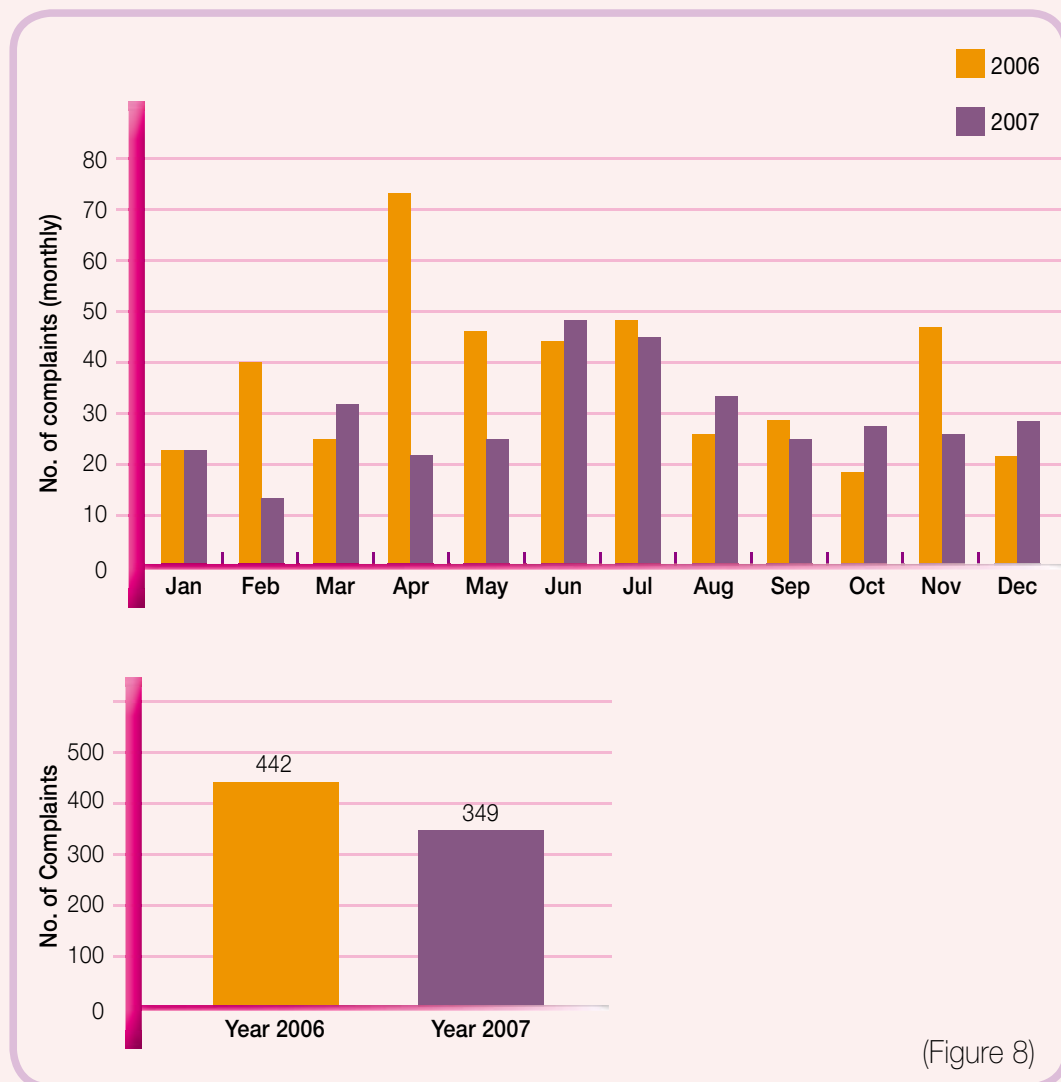
# 1 Note : "Chapter 2" aircraft are those aircraft which only comply with the noise standard stipulated in Chapter 2 of Annex 16, Volume 1, Part II to the Convention on International Civil Aviation.

# 2 Note : "Chapter 3" aircraft are those aircraft which comply with the more stringent noise standard stipulated in Chapter 3 of Annex 16, Volume 1, Part II to the Convention on International Civil Aviation.

## Working with the Public

### Complaint Hotline

In 2007, we received 349 complaints regarding aircraft noise (Figure 8), a 21% decrease compared to 2006.



(Figure 8)

## Public and Government Liaison

In 2007, we attended a total of 4 committee meetings of the Tsuen Wan District Council, the Central and Western District Council, Tuen Mun District Council and the Eastern District Council and 1 meeting with local communities. During these meetings, we explained the noise-mitigating measures we had implemented.

## Noise Data

We regularly uploaded new noise data to our website in 2007, enabling all members of the public to access our aircraft noise information.

## Target for 2008

In 2008, we will continue maintaining contact with concerned parties on the subject, and continue serving the community with noise data and our complaint hotline.

## Noise Monitoring

We continued to use a sophisticated computer-based Aircraft Noise and Flight Tracking Monitoring System (ANFTMS) to closely monitor aircraft noise in the vicinity of the flight paths in 2007. This system comprised 16 fixed noise monitors (Figure 9), which continually collect noise data on a real-time basis. All noise data were automatically correlated with the radar information on flight tracks, enabling us to compile accurate statistics on aircraft noise and more effectively investigate any noise complaints.



(Figure 9)



## Improvement Works in 2007

In 2007, we procured 8 monitor equipment units for replacing some of the aged monitors and the replacement work had been started in end 2007.

### **Target for 2008**

In 2008, we will continue our program of replacing aged noise monitoring terminals with units of new model to ensure the accuracy of the data. We will also continue to closely monitor aircraft noise and flight tracks around the clock using the ANFTMS.