



民航處 | 環保報告

Civil Aviation Department
Environmental Report 2000



香港民航處
Hong Kong Civil Aviation Department

前言 Foreword

這是民航處的第二份環保報告。此報告詳述了民航處的環保方針及策略、本部門的主要環保工作成效指標、環境管理計劃的發展情況和回顧我們就 2000 年所定立的環保目標的工作成果。

This is Civil Aviation Department's second environmental report, covering our policy and strategy, key performance indicators for the department, the continued development of our environmental management system and a review of our performance against targets set for 2000.

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主要工作職能範圍

Key Areas of Responsibility



香港民航處為香港飛行情報區及負責區範圍內運作的飛機提供航空交通管制服務，監察及規管香港所有關於民航服務的事務。主要的職能包括：

- (a) 負責在國際民航組織所指定由香港特別行政區負責的空域提供交通管制，航空資料及飛機事故警報服務，與及協調海空搜索及拯救的工作。
- (b) 提供精確的電子儀器如雷達、通訊儀器、導航設備及進場及著陸系統以確保航空交通能安全及有效率地運作。
- (c) 監察飛機及飛行員安全運作的事宜，包括確保在香港註冊的飛機的適航標準，檢查香港註冊的飛機，簽發航空運輸企業經營許可證，考核及簽發航空人員及飛機維修工程人員的執照，審批維修設施，確保空運危險物品的安全付運及就飛機事故及意外進行調查。

The Civil Aviation Department (CAD) is responsible for providing air traffic control services to all aircraft operating within the Hong Kong Flight Information Region and the Area of Responsibility, and for regulating and monitoring of all matters relating to civil aviation in Hong Kong. The prime responsibilities include:

- (a) the provision of air traffic control, flight information, air alerting service and air/sea search and rescue for all aircraft operating within the airspace assigned by the International Civil Aviation Organization to the Hong Kong Special Administrative Region;
- (b) the provision of sophisticated electronic equipment such as radar, radio communication, radio navigational aids and approach and landing aids to enable the efficient and safe operation of air traffic;
- (c) safety oversight of aircraft and aircrew operations, including the assurance of airworthiness standards of aircraft under Hong Kong register, flight inspection of locally registered aircraft and issue of air operator's certificate to local airlines, licensing of aircrew and aircraft maintenance personnel, approval of maintenance organizations, ensuring the safe carriage of dangerous goods by air and conducting aircraft incident and accident investigations;

- (d) 監察航空公司是否遵守規管定期航班服務的民用航空運輸協定及其他安排，監管不定期航班服務及就本地航空公司的空運牌照申請及民用航空運輸談判向有關當局提供資料。
 - (e) 審批飛機班次的編配安排，編制航空交通的統計資料。
 - (f) 制定飛機噪音政策及消減措施，並監察飛機進出香港國際機場時的航道使用情況及其噪音影響。
 - (g) 制定香港國際機場的營運及保安的標準，並監察其執行情況，及簽發機場牌照與香港機場管理局，以確保機場的安全水平。執行管制飛行障礙物的國際安全標準及制定有關的高度限制。
- (d) monitoring compliance by airlines with Air Services Agreements and other arrangements which govern scheduled air services, regulating non-scheduled air services, providing information to the relevant authorities regarding air transport licence applications and for air services negotiations;
 - (e) approval of scheduling of aircraft movements and compilation of air traffic statistics;
 - (f) formulation of aircraft noise policy and mitigation measures and monitoring of noise impact and track keeping performance of aircraft operating to and from the Hong Kong International Airport; and
 - (g) the drawing up and monitoring of compliance with operational safety and security standards at the Hong Kong International Airport and the issue of Aerodrome Licence to the licensee, i.e. Airport Authority, Hong Kong for the purpose of ensuring the airport is safe for use by aircraft, implementation of international safety standards for the control and marking of obstacles to air navigation and determining height restrictions.



環保政策

Environmental Policy



香港民航處在維持及發展一套安全及有效率的航空運輸系統的同時，亦致力將其環境影響減至可接受的低水平。我們將會全力執行以下政策以保護環境：

- (a) 採用可持續發展的觀念及原則來策劃、設計及使用我們的設施及服務。
- (b) 訂立措施去減少飛機噪音對環境及社區的影響。
- (c) 與受飛機噪音影響的社區及人士保持良好溝通。
- (d) 由節約，再用及循環再造去減省能源及原料的使用。
- (e) 確保符合環保規例為最基本的要求。
- (f) 提高及訓練員工對環保的認識及在決策過程中考慮環保的因素。
- (g) 積極與員工就環保政策及標準交換意見以持續改善我們的環保管理系統。

The Civil Aviation Department is committed to maintaining and developing a safe and efficient air transport system for Hong Kong whilst keeping the environmental effects to an acceptable minimum. We will strive to act as responsible stewards of the environment at all times by:

- (a) applying the principle of sustainable development in the planning, design and operation of our facilities and services;
- (b) developing measures to minimize the impact of aircraft noise on the environment and local communities;
- (c) engaging in an open dialogue with local communities and others affected by aircraft noise;
- (d) economizing the use of energy and materials through savings, reuse and recycling;
- (e) ensuring compliance with environmental regulations as a minimum standard of performance;
- (f) promoting the awareness and training of staff to ensure that environmental actions are included in the balance of all our decision making; and
- (g) seeking continual improvement of environmental management systems through the effective communication of our policy and standards.

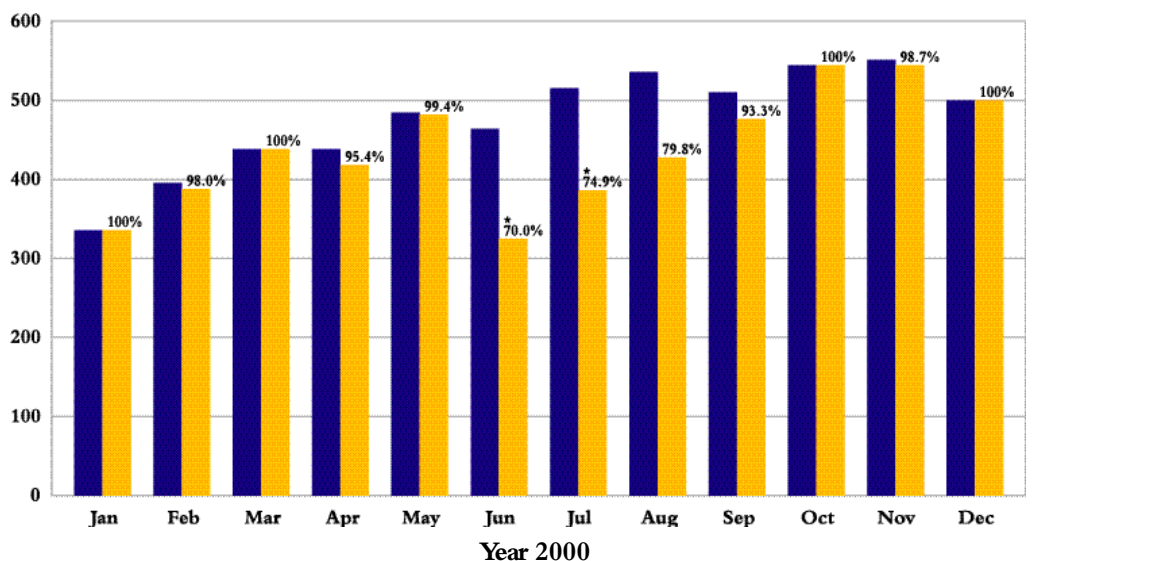
飛機噪音 Aircraft Noise

就2000年定立的目標所作出的努力及成果

- 與航空公司及航空交通管制組人員共同努力去達致：
 - (1) 90%在午夜12時至早上7時到港的飛機從機場西南面經海上降落。
 - (2) 95%在晚上11時至早上7時使用07號跑道的離港飛機採用經西博察海峽的向南航道。

我們環境監理組的同事一直密切監察飛機噪音消減措施的施行情況。在2000年，我們錄得平均超過90%在午夜至早上7時到港的飛機能夠從機場西南面經海上降落及超過95%在晚上11時至早上7時向機場東北面離港之飛機能夠採用向南經西博察海峽的航道起飛。有少數飛機不能依照以上的要求。這些情況均是由於當時的風速及風向、導航系統的維修保養、航空交通條件及飛行安全等等因素所致。

圖一：午夜至早上7時抵港的飛機須從西南方進場的噪音消減措施的執行情況



* 註：在6月及7月份，分別有11及9個深夜時段，由於當時風速 / 風向情況，飛機須要從東北方向降落機場，令致6月及7月份的整體執行百分比分別降至70.0%及74.9%。

Performance against targets

- **Work with airlines and Air Traffic Control personnel to achieve:**
 - (1) 90% of arriving aircraft landing from the southwest (i.e. over water) between midnight and 07:00 am.
 - (2) 95% of departing aircraft using the southbound route via West Lamma Channel when Runway 07 is in use between 11:00 pm and 07:00 am.

Measures to control the impact of aircraft noise have been closely monitored by our environmental management team. In 2000, we recorded that on average over 90% of arriving aircraft were able to land from the southwest (over water) between midnight and 07:00 am; and over 95% of aircraft departing to the northeast of the airport were able to take the southbound route over the West Lamma Channel between 11:00 pm and 07:00 am. The small percentage of non compliant flights were caused by factors such as prevailing wind conditions, maintenance of ground navigation aids, air traffic congestion, safety considerations etc.

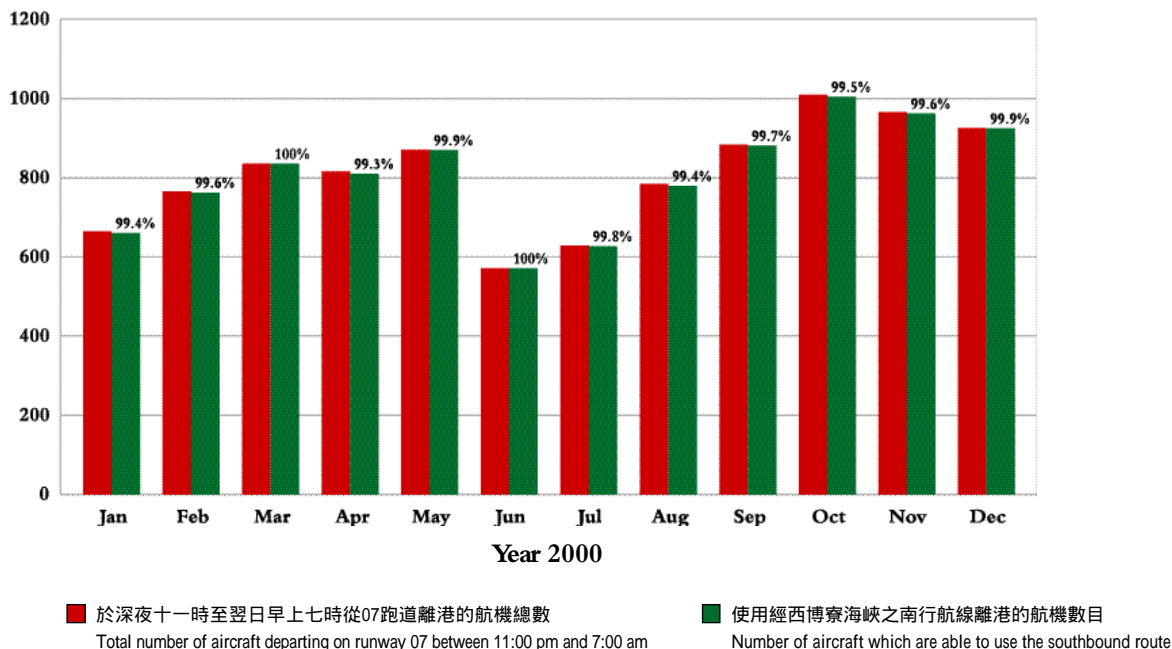
Diagram 1: Achievement record for aircraft arriving between midnight and 07:00 am to land from the southwest.

■ 於深夜十二時至早上七時抵港飛機總數
Total number of aircraft arriving between midnight and 7:00am
■ 經機場西南面對出海面進入機場的航機數目
Number of aircraft which are able to land from the southwest, i.e. over water

* Note: There were 11 and 9 overnight periods in June and July respectively during which the wind condition prevailing at the time was unfavourable for aircraft to land from the southwest. This explains why the overall performance rates for June and July were only 70.0% and 74.9% respectively.

圖二：於晚上11時至早上7時內從07跑道離港的班機須使用經西博寮海峽的南行航線的噪音消減措施的執行情況

Diagram 2 - Achievement record for aircraft departing on Runway 07 between 11:00 pm and 07:00 am to use the southbound route via the West Lamma Channel.



- 就從機場向東北面起飛的飛機，航空公司繼續採用國際民航組織的噪音消減起飛程序

此飛機噪音消減措施從1999年8月起開始實施。該程序要求飛機在較短距離內爬升至較高的飛行高度，從而減低飛機噪音對機場附近地區的影響。

- 制定時間表，逐步淘汰較舊及較嘈吵類型的飛機在香港國際機場升降

根據國際民航組織大會的決議，較舊型及嘈吵的第二類別飛機*將會逐漸被新一代較寧靜的第三類別飛機*所替代。我們在香港推行淘汰高噪音飛機的工作將會配合國際做法。作為這計劃的一部份，我們成功地在1999年10月起實施了一禁制措施，禁止航空公司編排高噪音的商用噴射機種(即是未能符合國際民用航空公約附件16第一卷第二部分第三章所載的噪音標準的飛機)在晚上11時至早上7時升降。

* 註：第二類別或第三類別飛機是分別指那些符合國際民用航空公約附件16第一卷第二部分，第二章或第三章所載的噪音標準的飛機。

- Airlines continue to adopt the International Civil Aviation Organisation (ICAO) noise abatement take-off procedures for aircraft departing to the northeast of the airport**

This noise mitigating measure has been in place since August 1999. Under these procedures, aircraft are required to maintain a pre-determined speed and power setting during the initial phase of the take-off so as to attain a higher altitude within a short distance. This aims to reduce the noise impact on areas located in the vicinity of the airport.

- Establish a programme to gradually phase out the operation of older and noisier aircraft at Hong Kong International Airport**

Under an ICAO Assembly Resolution, the older, noisier aircraft (known as Chapter 2 aircraft*) would be gradually replaced with newer, quieter aircraft (known as Chapter 3 aircraft*). Our programme of phasing out noisier aircraft in Hong Kong will be in line with international practices. As part of our phasing out programme, a ban on the scheduled operation of Chapter 2 aircraft between 11:00 pm and 07:00 am has been successfully introduced since October 1999.

* Note: "Chapter 2" or "Chapter 3" aircraft refer to those aircraft which meet the standards of noise specified in Volume I, Part II, Chapter 2 or Chapter 3 respectively of Annex 16 to the Convention on International Civil Aviation.

- 與國泰航空公司一同研究於晚上時份在香港國際機場採用持續降落模式的可行性

在成功地於國泰航空有限公司及其他航空公司的飛機上試行持續降落模式後，我們正式宣佈由2000年8月10日開始，在晚上十一時至早上七時的時段內，從東北方向進場的航機在飛經西貢、馬鞍山及沙田上空時要盡量使用持續降落模式。由於採用此降落程序的航機由較高的高度開始下降，並且在開始進場時通常會使用較低動力飛行，故地面上聽到的噪音會較低。

- 在航道附近區域加裝新的飛機噪音監察站以進一步增強本處的飛機噪音監察能力

我們在2000年內分別於渣甸山及葵涌增設了兩個飛機噪音監察站以加強飛機噪音及航跡監察系統的監察功能。到目前為止，該系統共有15個監察站。除了上述兩個新增的監察站外，其餘的分別位於沙螺灣、東涌、陰澳、青衣、大圍、中半山、北角、筲箕灣、西荃灣、汀九、青龍頭、大欖涌及馬灣。

- **Undertake a study with Cathay Pacific Airways to examine the feasibility of adopting Continuous Descent Approach (CDA) procedure at HKIA during night period**

Following successful trials on CDA involving aircraft from Cathay Pacific Airways Limited initially and all other airlines in the final phase, it was announced on 10 August 2000 that all aircraft on approach to the HKIA from the northeast between 11:00 pm and 07:00 am, which typically fly over Sai Kung, Ma On Shan and Shatin, should adopt a new descent profile, CDA, whenever practicable. As aircraft on CDA will fly higher and normally in a low power/low drag configuration during the commencement of the approach, noise experienced on the ground is expected to be lowered.

- **Install additional noise monitors under or in the vicinity of flight paths to enhance the monitoring capability**

Two additional noise monitors at Jardine's Lookout and Kwai Chung respectively were installed during the year to enhance the monitoring capability of the aircraft noise and flight track monitoring system. At present, the system has a total of fifteen fixed noise monitors. Apart from the two newly installed ones, the others are located at Sha Lo Wan, Tung Chung, Yam O, Tsing Yi, Tai Wai, Mid-levels in Central, North Point, Shaukeiwan, West Tsuen Wan, Ting Kau, Tsing Lung Tau, Tai Lam Chung and Ma Wan.



圖三：飛機噪音監察站位置圖

Diagram 3: Noise Monitoring Terminals Location Map



- 維持與有關區議會、傳媒及有關團體作定期的接觸

在2000年，我們得到傳媒及有關的區議會，包括南區、荃灣、沙田及大埔區區議會的邀請，講解飛機進入及離開機場的運作情況及其對於居住在航道附近的居民所造成的噪音影響。在2001年，我們會繼續在有需要時向有關區議會及其飛機噪音工作小組 報我們的工作，以鞏固雙方的關係。我們在2000年總共收到419宗飛機噪音投訴。我們會以專業及持平的態度去調查所有的投訴，盡力回應社會的需要。我們亦會繼續在民航處網頁內發放按月及按年的飛機噪音資料，與及 報噪音消減措施的執行情況。

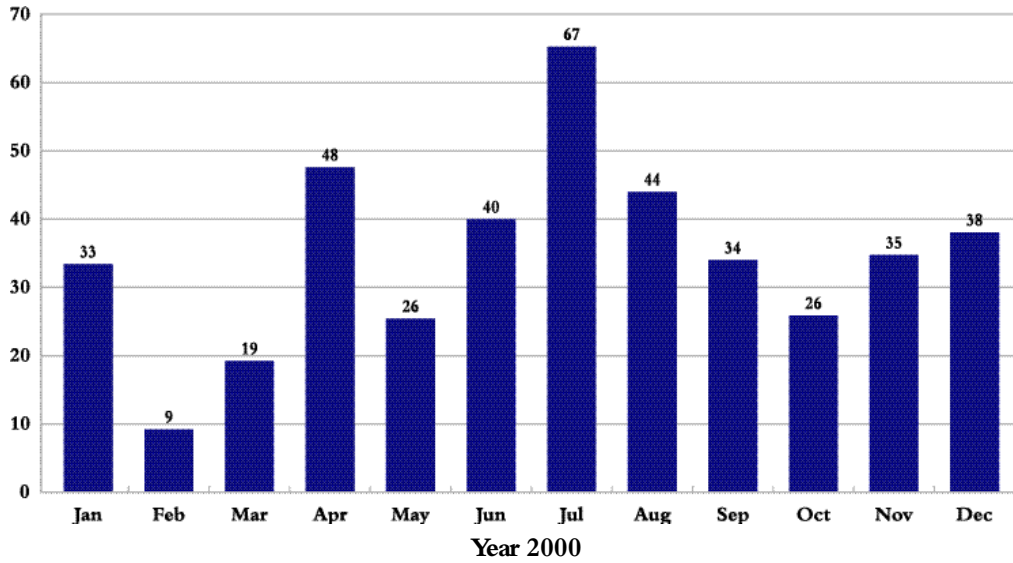
- **Maintain regular contact with concerned districts, the media and other concerned parties**

During the year, we were invited by the media and concerned district councils including Southern, Tsuen Wan, Shatin and Tai Po to explain the flight operation to and from the airport and its noise impact on areas under or in the vicinity of flight paths. This year, we will continue to strengthen our links with the concerned district councils and its aircraft noise working groups through briefings to them as and when required.

In 2000, we received a total of 419 complaints on aircraft noise. We will endeavour to respond to community needs by investigating all complaints in a professional and impartial manner. We will also continue to produce monthly and yearly noise data and performance records of noise abatement measures in our website.

圖四：飛機噪音投訴數目

Diagram 4: Number of Aircraft Noise Complaints



- 對噪音預測等量線25進行檢討工作

我們將會聯同機場管理局於2003年前對噪音預測等量線25進行檢討工作。

- **Conduct review of Noise Exposure Forecast (NEF) 25 contours**

In conjunction with the Airport Authority, an update review of the noise contour will be conducted by 2003.

2001 年的新目標

- 於東涌第二期發展區域內增設一個飛機噪音監察站以監察該地區的飛機噪音環境。

New target in 2001

- **Identify site for installation of an additional noise monitor in the second phase development area of Tung Chung to monitor the aircraft noise environment.**



節省能源

Energy Conservation



在 2000 年內的發展

在2000年初，位於航空交通管制大樓以北的備用航空交通管制大樓已投入運作，以備一旦主要航空交通管制設施受火警或嚴重事故影響不能運作的情況下作為應急之用。備用大樓設有備用航空交通管制中心、備用指揮塔和備用航空通訊中心。在2000年內，這些備用設施亦曾作為航空交通管制訓練及熟習機場運作練習之用。另外，一個小型飯堂於2000年8月在備用大樓內啟用。由於備用大樓是位於機場禁區範圍內，因此不能使用煤氣及石油氣，而電力則是它唯一耗用的能源。

在2000年9月尾，為了配合技術及策劃部的電子工程組的擴充，民航處在機場空運中心增加了117平方米辦公室樓面面積。

就2000年訂立的目標所作出的努力及成果

- 設立基準數據及準則以監控民航處各辦事處的耗電量

我們在位於金鐘政府合署的民航處總部辦公室安裝了獨立電錶，以記錄電力的耗用情況，及從而找出可以進一步減低耗電量的地方。總部辦公室的電力耗用基準數據和備用大樓首年運作的耗電量數據已於2000年收集妥當。

Development in 2000

In early 2000, a Backup Air Traffic Control Complex (BATCX), located to the north of the main Air Traffic Control Complex (ATCX), was put into contingency use in case of fire or serious mishaps affecting the main air traffic control facilities. The BATCX houses the Backup Air Traffic Control Centre, the Backup Aerodrome Control Tower and the Backup Communications Centre. The facilities have been used for air traffic control training and familiarization in 2000. In August 2000, a small canteen was opened in BATCX. As it is located in airside area, use of town gas or LPG is not allowed. Therefore, electricity is the only source of energy in use.

In end September 2000, our offices at Airport Freight Forwarding Centre (AFFC) were expanded by 117 m² to accommodate the additional staff of Electronics Engineering Section.

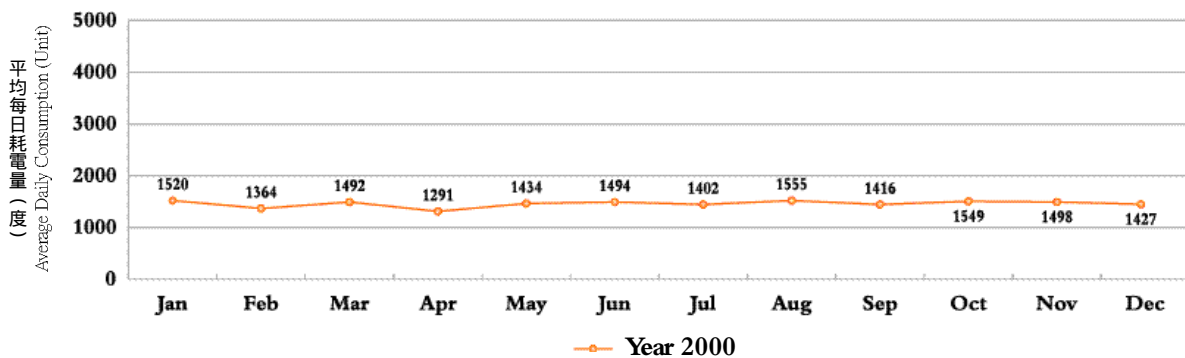
Progress against targets

- **Establish base figures and yardstick for controlling electricity consumption in various CAD offices**

In order to improve our ability to track energy consumption and consequently target areas for improvement, a separate meter was installed at CAD Headquarter at Queensway Government Offices (QGO). The base electricity consumption figures for the headquarter offices were collected. For the BATCX, the electricity consumption figures for the first year of its operation were also collected.

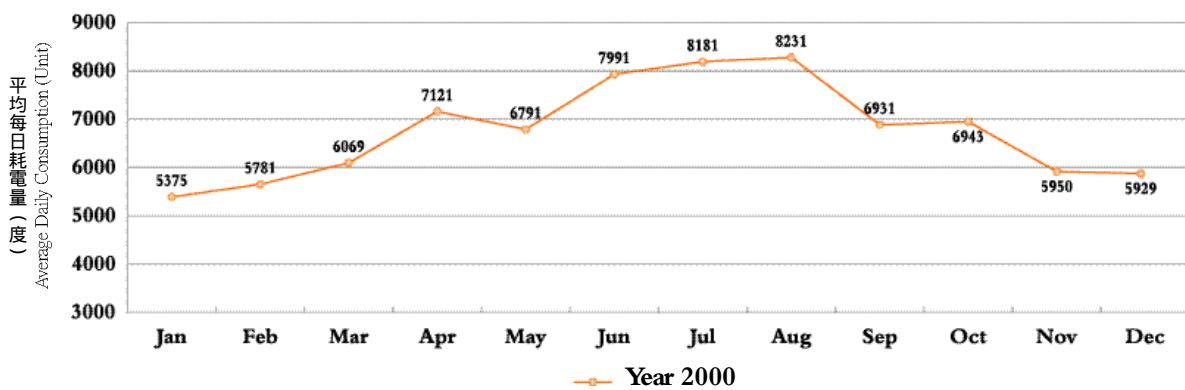
圖五：位於金鐘政府合署的民航處總部的2000年用電量記錄

Diagram 5: Electricity Consumption in CAD offices at Queensway Government Offices in 2000



圖六：備用航空交通管制大樓的2000年用電量記錄

Diagram 6: Electricity Consumption in BATCX in 2000



• 探求及採用節約能源的措施

我們節約能源的目標是要減低能源的消耗及改善能源的效益。根據機電工程署在1999年於航空交通管制大樓進行的能源審核的結果，我們考慮了一些措施以進一步節省能源，結果概述如下：

- (a) 我們準備用電子鎮流器來取代現時安裝在航管大樓內電光管組件中的電感式鎮流器。更換工程預算在2001年第一季進行。據估計，更換電感式鎮流器可減低30%耗電量，每年大約可節省港幣60,000元電費。
- (b) 現正物色適合的諧波調節器以裝置在航管大樓及備用大樓的供電系統，從而幫助改善供電系統的能源效益。

• Explore various initiatives in energy saving

Our target of energy saving is geared towards the reduction of energy consumption and improvement of energy efficiency. Based on the findings of the energy audit conducted by EMSD in 1999 at ATCX, which houses the Air Traffic Control Centre and Air Traffic Control Tower, we contemplated a few measures as part of our continuous efforts in energy conservation. The results are as follows:

- (a) Procurement of electronic ballasts to replace the electro-magnetic ballasts of all the fluorescent light tubes installed in ATCX was in progress. The replacement work was scheduled to be carried out in the first quarter of 2001. It is estimated that the replacement of electro-magnetic ballasts with electronic types will reduce energy consumption by about 30%. The annual energy cost saved by the use of electronic ballasts is estimated to be \$60,000.
- (b) Suitable harmonic conditioners are now being identified for installation to the electricity supply system of the ATCX and the BATCX. The harmonic conditioners can help to improve the overall energy efficiency.

(c) 有關在航管大樓的公用地方裝置移動探測器，以確保空調及燈光在房間空置了一段時間後會自動關上的措施，我們在成本效益方面進行了詳細的研究。由於該裝置的成本高昂及預期使用率低，此措施已暫時被擱置。

除了由民航處負責大廈管理的航管大樓及備用大樓外，民航處亦已就其他位於金鐘政府合署、機場客運大樓及機場空運中心的辦公室，向有關管理當局表達我們對節約能源的關注。我們曾向金鐘政府合署大廈管理處反映我們對「用電需求管理計劃」的支持。「用電需求管理計劃」是一項由中華電力有限公司、香港電燈有限公司及政府共同推行的計劃，目的在維持本港有穩定充足電力供應的同時，促進善用及節約能源。此計劃包括一個向非住宅用戶提供部份安裝成本回扣優惠的措施以鼓勵他們更換高效能照明及空調設備。

- 購買能源效益高的儀器

作為一個對環境負責任的機構及支持政府對環境保護的承擔，我們有義務依從中央訂定的環保採購指引。在可行的情況下，我們會把環保要求，如高循環再造性及高能源效益等條款，放在標書細則中。

- 維持耗電量的增長低於香港國際機場的航空交通增長

2000年的客貨運處理量分別達3,340萬人次及224萬噸，較1999年上升了9.8%及13.3%。飛機升降數目亦增至181,900架次，相對1999年上升了8.7%。雖然航空交通量有不少的增長，但是航管大樓2000年的平均每日耗電量(15869度)卻較去年下降了0.3%。這個成果相信是歸因於在2000年實施了的多項省電措施及員工對節約能源的重視。不過，機場空運中心2000年的平均每日用電量增至586度，較1999年增加了15%。這是由於兩個原因：第一，技術及策劃部的電子工程組就新的衛星航空交通管制系統加裝了新的電腦設備；第二，位於機場空運中心的辦事處擴大了，以應付電子工程組的擴充。

(c) A detailed study on the cost effectiveness of installing automatic occupancy sensors at the common use areas of the ATCX to turn off lighting and air conditioning automatically when an area is not in use was carried out. However, in view of the high equipment cost and the expected low utilization rate of the measure, it was decided to put in abeyance this option.

Apart from ATCX and BATCX of which the building management is under the purview of CAD, for other CAD offices in QGO, Passenger Terminal Building of HKIA and AFFC, our concern on energy conservation has been expressed to the relevant parties. We conveyed to the Building Management of QGO of our full support on the Demand Side Management Programme (DSMP) launched by the two power companies, CLP Power Hong Kong Ltd and Hongkong Electric Company Limited, and the Government, to promote energy efficiency and conservation while maintaining reliable and adequate electricity supply in Hong Kong. The programme encourages the installation of energy efficient lighting and air-conditioning equipment by rebating part of the installation costs.

- **Purchase equipment of high standard of energy efficiency**

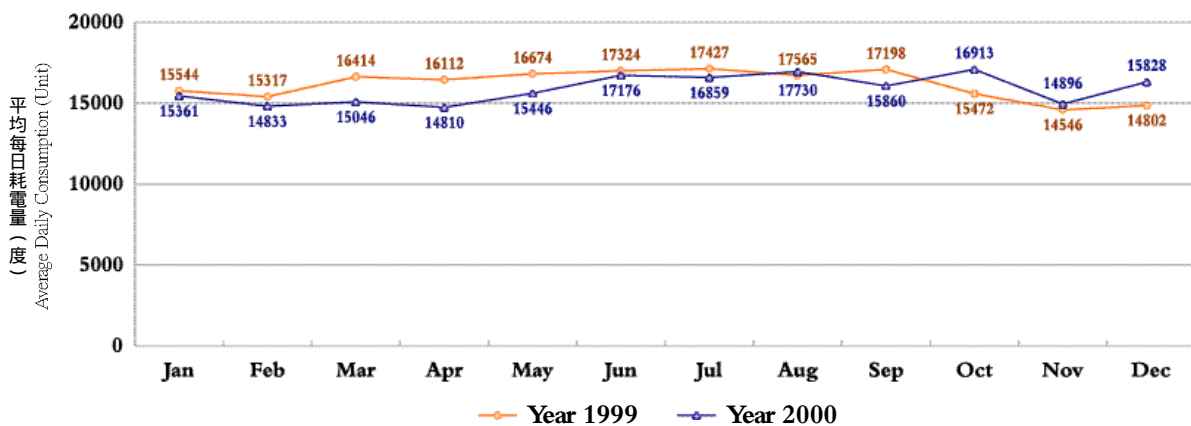
As an environmentally responsible organization and in support of Government's commitment to environmental protection, we are obliged to observe central guidelines for green purchasing and take environmental considerations into account when procuring goods and services. Environmental terms such as high standard of recyclability and energy efficiency have been included in tender specifications whenever applicable.

- **Maintain the growth in electricity consumption at a level below the traffic growth at HKIA**

In 2000, passenger and cargo throughput reached 33.4 million and 2.24 million tonnes respectively, represented a rise of 9.8% and 13.3% over 1999. Aircraft movements also increased to 181,900, a rise of 8.7% over 1999. In spite of the growth in air traffic, average daily electricity consumption in ATCX in 2000 decreased by 0.3% comparing to 1999, amounted to 15869 kilowatt-hours. The implementation of various energy saving initiatives implemented coupled with increased consciousness of staff to energy conservation were believed to be major factors contributing to the lower electricity consumption in 2000. For AFFC, the average daily power consumption however was increased to 586 kilowatt-hours, a 15% rise over 1999. The increase was attributed to two main reasons. Firstly, additional new computer equipment was installed in the office of Electronics Engineering Section of Technical & Planning Division for the new satellite-based CNS/ATM systems. Secondly, the offices at AFFC had been expanded to cater for the expansion of Electronics Engineering Section.

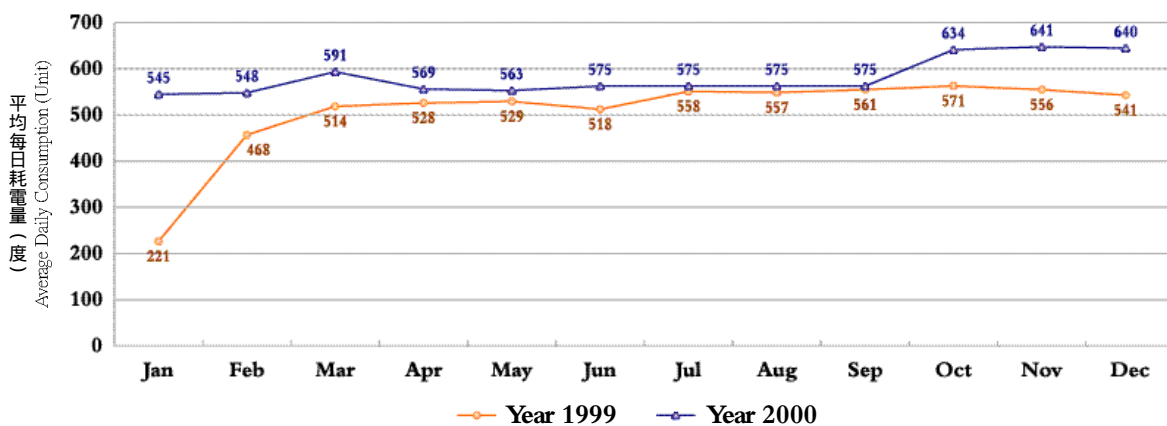
圖七：航空交通管制大樓及控制塔的用電量記錄

Diagram 7: Electricity Consumption in ATCX/TWR



圖八：民航處設於機場空運中心的辦公室用電量記錄

Diagram 8: Electricity Consumption in CAD Offices at AFCC



2001 年的新目標

New targets in 2001

- 完成在航管大樓內，以高能源效益的電子鎮流器取代電光管組件中的電感式鎮流器的工程。
- 維持2001年耗電量的增長低於這年度內航空交通在飛機架次方面的增長。
- Complete the installation of more energy efficient electronic ballasts to replace the electro-magnetic ballasts of all the fluorescent light tubes installed in ATCX.
- Maintain the growth in electricity consumption at a level below the traffic growth, in terms of aircraft movements, in 2001.

減少廢物 Waste Minimisation

就2000年訂立的目標所作出的努力及成果

- 在2000年再減省5%耗紙量

雖然客貨運處理量於2000年分別較1999年增加了9.8%及13.3%，但是憑員工在減省用紙方面作出的努力，我們在2000年減少了6%的用紙量。

Progress against targets

- Further reduce paper consumption by 5% in 2000

Despite the increase in air traffic in 2000, passenger and cargo throughput up 9.8% and 13.3% respectively over 1999, we achieved a reduction in paper consumption of 6%. This was attributed to increased awareness of staff in waste reduction.

	1998	1999	2000
耗紙量	8000疊	6300疊 (13% 全不含木材)	5925疊 (100% 全不含木材)
Paper Consumption	8000 reams	6300 reams (13% were wood-free)	5925 reams (100% were wood-free)

- 繼續執行廢紙及雷射打印機墨盒的回收計劃

將用過的紙張放置在特別的回收袋，使清潔承辦商能夠分開處理及交回已用完的雷射打印墨盒給供應商作循環再造之用都是我們的持續目標。

- Continue to implement the waste paper and laser printer cartridge recycling schemes

It is a continuous target to dispose of waste paper separately for cleaning contractors' separate treatment and to return used printer cartridge to suppliers for recycling.

	1998	1999	2000
雷射打印機墨盒	購買數量 153	購買數量 150	購買數量 166
	回收數量 33	回收數量 72	回收數量 67
Laser Printer Cartridge	153 units purchased	150 units purchased	166 units purchased
	33 units recycled	72 units recycled	67 units recycled

- 遵守有關的環保條例去處理海水冷卻系統排放出的海水及處置化學廢物

作為一個排污者民航處已依照環保署根據香港法例第 354 章廢物處置條例下之化學廢物（一般）規例所訂立的要求及條件來處置我們的機器所排放出之廢物。

航管大樓及備用大樓的海水冷卻空調系統所排出的海水亦符合環保署根據香港法例第 358 章水質污染管制條例所訂立的規定。

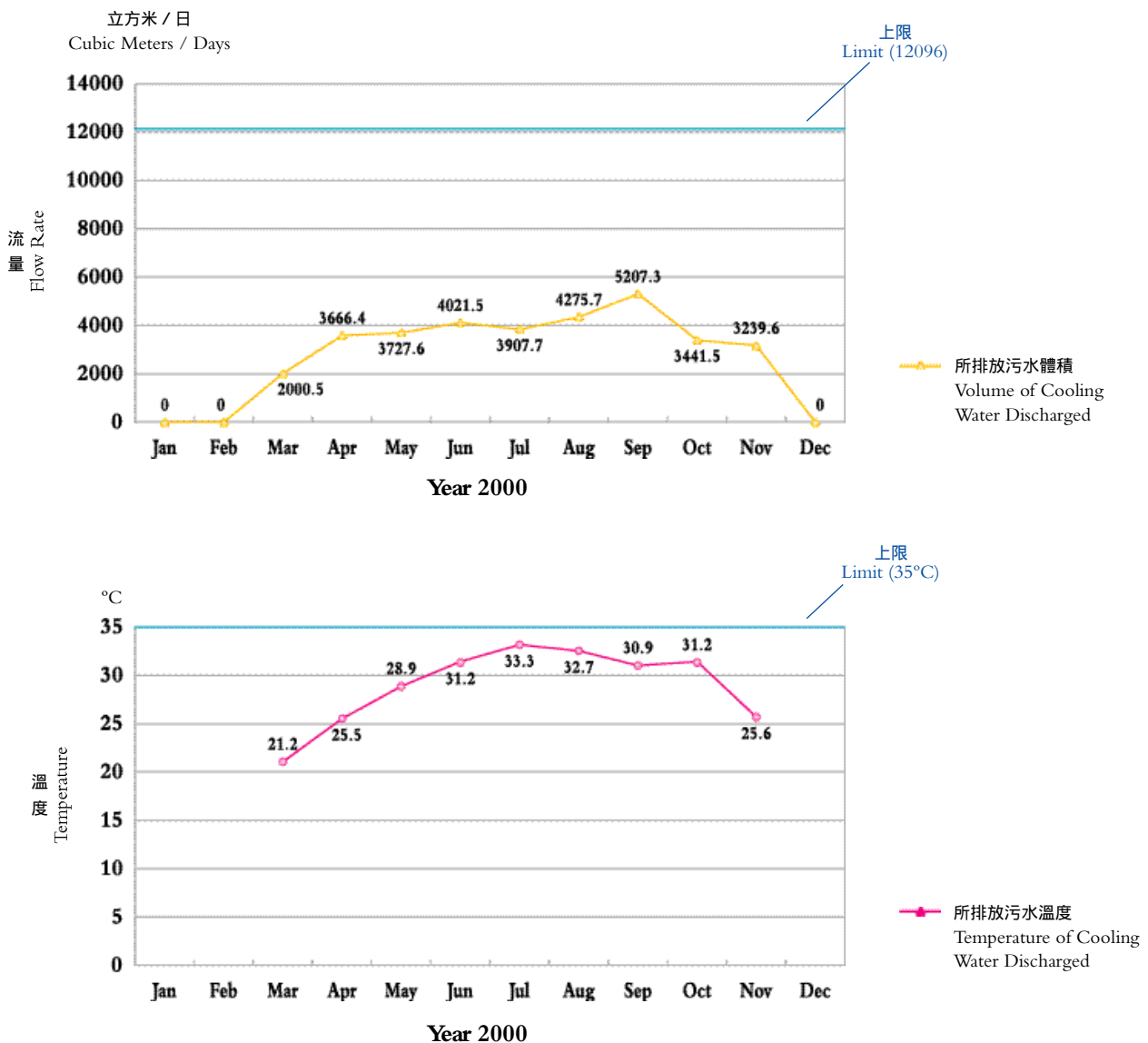
圖九：航空交通管制大樓 / 控制塔所排放的污水分析

- Comply with environmental regulations with regard to the discharge of sea water for cooling system and chemical waste disposal

As a waste producer, the disposal of waste in regard to the plants and machinery operated by CAD was conducted in compliance with the terms and conditions set by the Environment Protection Department under the Waste Disposal (Chemical Waste) (General) Regulation of the Waste Disposal Ordinance (Chapter 354).

The discharge of sea water for the cooling system in ATCX and BATCX was conducted in compliance with the Water Pollution Control Ordinance (Chapter 358).

Diagram 9: Analysis of Sea Water Discharged from ATCX/TWR

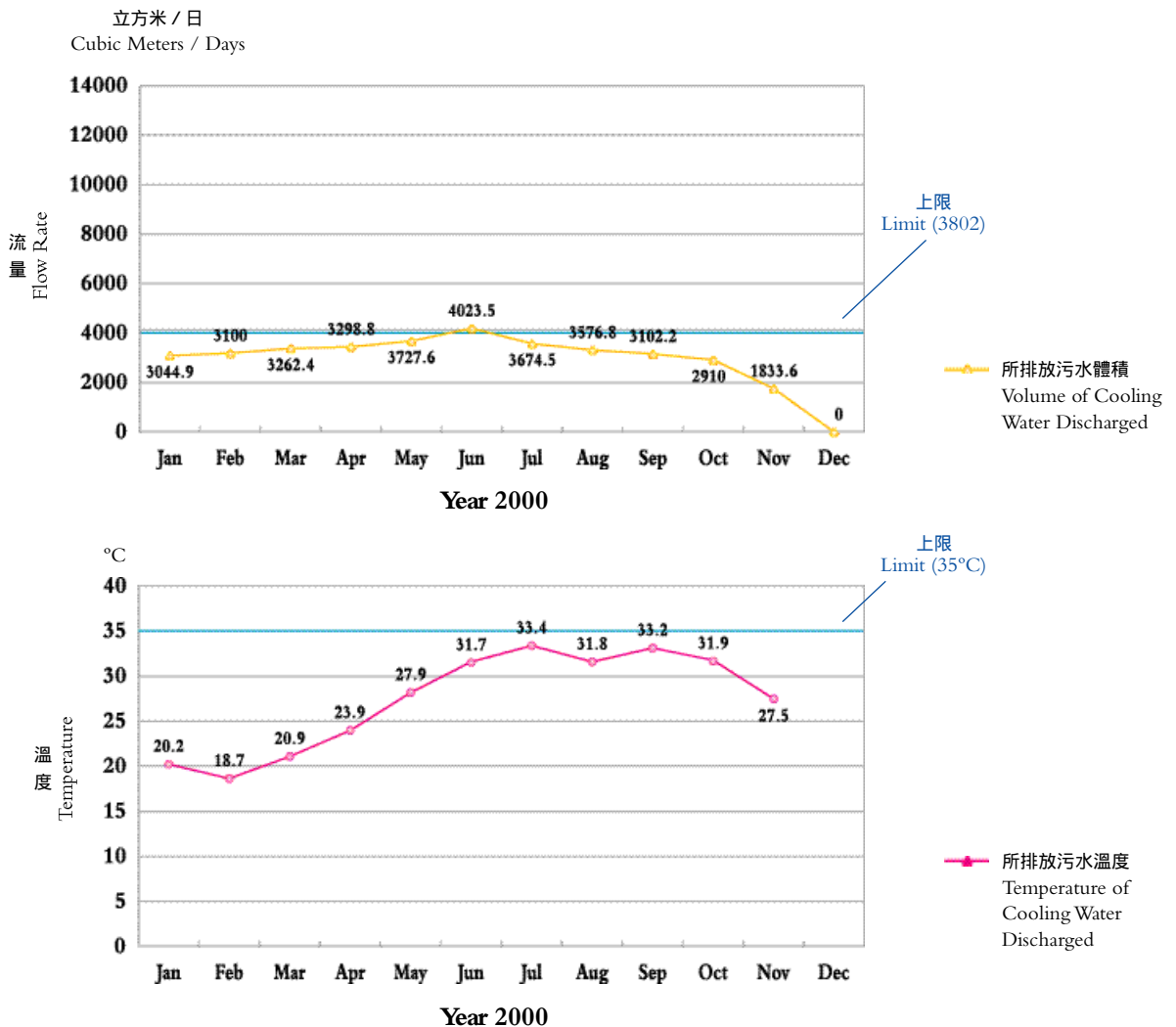


* 所排放污水的酸鹼值及總殘餘氯水平均符合環保署訂定的標準（酸鹼值：6-9，總殘餘氯：0.5毫克 / 升）

* The PH and Residual Chlorine levels of the discharged water were also within the limits (PH : 6-9, Residual Chlorine : 0.5 mg/l) set by EPD.

圖十：備用航空交通管制大樓所排放的污水分析

Diagram 10: Analysis of Sea Water Discharged from BATCX



- * 所排放污水的酸鹼值及總殘餘氯水平符合環保署訂定的標準（酸鹼值：6-9，總殘餘氯：0.5毫克 / 升）
- * 由於室外溫度高，2000年6月平均每日所排放的污水體積超過了環保署訂定的標準。我們後來採取了措施，嚴控海水吸取量，使每日排放的污水量降至標準範圍內。

- * The PH and Residual Chlorine levels of the discharged Water were also within the limits (PH: 6-9, Residual Chlorine: 0.5mg/l) set by EPD.
- * Average daily volume of cooling water discharged in June 2000 exceeded the limit stipulated by EPD due to high outdoor temperature. Corrective action was subsequently taken to restrict the cooling water intake rate and the daily discharge volume reduced to within limit.

• 鼓勵員工使用電郵溝通

此目標是通過鼓勵員工用電郵作內部溝通，從而節約用紙。這一點幫助了我們在2000年減少達6%用紙量。我們會繼續不遺餘力鼓勵員工多以電子媒介來溝通。

• Encourage use of e-mail for office communication

This target is to reduce paper consumption by encouraging staff to use e-mail for internal communication. It contributed to our achievement of 6% reduction in paper consumption in 2000. We will spare no effort in promoting electronic communication among staff.

2001 年的新目標

- 維持耗紙量在2000年度水平。
- 以重量為準則設立基準數據去監察我們在廢紙回收作循環再造方面的表現。

New targets in 2001

- Maintain paper consumption at the level in 2000.
- Establish base figures and yardstick in terms of weight for monitoring our performance on collection of waste paper for recycling.

目標概覽

Target Summary



項目 Issue	目標完成日期 Target Date	進度 Progress
飛機噪音 Aircraft Noise		
<p>與航空公司及航管共同努力去達致95%在晚上11時至早上7時使用07號跑道離港飛機採用向南的航道</p> <p>Work with airlines and ATC to achieve 95% departing aircraft using southbound route when Runway 07 is in use between 11:00 pm and 7:00 am</p>	2000	達到目標 Achieved
<p>與航空公司及航管共同努力達致90%在晚上12時至早7時到港的飛機從機場西南面經海上降落</p> <p>Work with airlines and ATC to achieve 90% of arriving aircraft landing over water from the southwest between midnight and 7:00am</p>	2000	達到目標 Achieved
<p>與航空公司達成採用國際民航組織的噪音消減起飛程序的協議</p> <p>Secure agreement with airlines for adopting the ICAO noise abatement take-off procedures</p>	2000	達到目標 Achieved

項目 Issue	目標完成日期 Target Date	進度 Progress
<p>確立時間表去逐步淘汰在香港國際機場運作的較舊型及嘈吵的飛機</p> <p>Establish a programme to gradually phase out the operation of older and noisier aircraft at HKIA</p>	<p>持續目標 Continuous Target</p>	<p>繼續 Continuing</p>
<p>與國泰航空公司研究在晚上時份採用持續降落模式的可行性</p> <p>Undertake a study with Cathay Pacific Airways to examine the feasibility of adopting CDA approach procedure at HKIA during night period</p>	<p>2000</p>	<p>達到目標 Achieved</p>
<p>在航道範圍安裝更多的噪音監察器</p> <p>Install additional noise monitors in the vicinity of flight paths</p>	<p>2000</p>	<p>達到目標 Achieved</p>
<p>與有關地區，傳媒及其他人士保持定期聯絡</p> <p>Maintain regular contact with concerned districts, the media and other concerned parties</p>	<p>持續目標 Continuous Target</p>	<p>繼續 Continuing</p>
<p>設立網頁及在機場客運大樓設立資訊板以方便公眾查閱有關飛機噪音及飛行航道的資料</p> <p>Maintain an internet web site and a static display in the Passenger Terminal Building to facilitate public access to aircraft noise and flight path information</p>	<p>2000</p>	<p>達到目標 Achieved</p>
<p>對噪音預測等量線25進行檢討工作</p> <p>Conduct review of Noise Exposure Forecast (NEF) 25 contours</p>	<p>2003</p>	<p>繼續 Continuing</p>
<p>在東涌增設一個飛機噪音監察站</p> <p>Install additional noise monitor in Tung Chung</p>	<p>2001</p>	<p>有待完成 To be achieved</p>
<p>節省能源 Energy Conservation</p>		
<p>設立基準數據及準則去監控民航處各辦事處的耗電量</p> <p>Establish base figures and yardstick for controlling electricity consumption in various CAD offices</p>	<p>2000</p>	<p>達到目標 Achieved</p>
<p>探求及採用節約能源的措施</p> <p>Explore various initiatives in energy savings</p>	<p>持續目標 Continuous Target</p>	<p>繼續 Continuing</p>
<p>購買能源效益高的儀器</p> <p>Purchase equipment of high standard of energy efficiency</p>	<p>持續目標 Continuous Target</p>	<p>2000年達到目標 Achieved in 2000</p>
<p>持維耗電量的增長低於航空交通數量的增長</p> <p>Maintain the growth in electricity consumption at a level below the growth in air traffic movements</p>	<p>持續目標 Continuous Target</p>	<p>2000年達到目標 Achieved in 2000</p>

項目 Issue	目標完成日期 Target Date	進度 Progress
減少廢物 Waste Minimization		
繼續執行廢紙及雷射打印機墨盒的回收 Continue to implement the waste paper and laser printer cartridge recycling schemes	持續目標 Continuous Target	繼續 Continuing
遵守有關的環保條例去處理海水冷卻系統所排出的海水及處置化學廢物 Comply with environmental regulations with regard to the discharge of sea water for cooling system and chemical waste disposal	持續目標 Continuous Target	達到目標 Achieved
再減省5%的耗紙量 Further reduce paper consumption by 5%	2000	達到目標 Achieved
維持耗紙量在2000年度水平 Maintain the paper consumption at the level in 2000	2001	有待完成 To be achieved
以重量為準則設立基準數據去監控廢紙回收以作循環再造 Establish base figures and yardstick in terms of weight for monitoring performance on collection of waste paper for recycling	2001	有待完成 To be achieved
鼓勵員工使用電郵溝通 Encourage use of e-mail for office communication	持續目標 Continuous Target	繼續 Continuing