

# 民航處計劃

## The Civil Aviation Department Project

行政長官在二零零六至零七年《施政綱領》提出，更換民航處航空交通管制(空管)系統，並在機場島興建民航處新總部，以鞏固香港在區域航空服務的領導地位，維持航空業的長遠發展。本處為落實這項綱領，展開上述計劃。

In order to reinforce Hong Kong's leading position in regional aviation services and sustain the long-term growth of the industry, the Chief Executive announced in the 2006-07 Policy Agenda an initiative to replace the air traffic control (ATC) system and develop a new CAD Headquarters on the Airport Island. The Civil Aviation Department Project (the CAD Project) was initiated to implement the commitment.

計劃目的為更換現有空管系統，以應付航空交通量預計的增長，並興建民航處新總部，以容納新空管中心及本處各專責分部在同一大樓辦公，從而善用資源和提升效率。

### 興建民航處新總部

香港機場管理局董事會撥出位於港龍/中航空大廈以北、東輝路兩旁，佔地共約29 800平方米的土地，用以興建本處新總部。

建築工程以「設計及建造」方式進行，優點在於初期地面工程和各階段的詳細內部設計工作可同步進行，從而加快工程進度。

The CAD Project aims to replace the existing ATC system in order to handle the projected growth in air traffic while at the same time develop a new CAD Headquarters to accommodate the new ATC Centre and all CAD functional divisions under one roof to optimise resource utilisation and enhance efficiency.

### Development of the New CAD Headquarters

A site north of the Dragonair House/CNAC Building on both sides of Tung Fai Road with a combined site area of approximately 29 800 m<sup>2</sup> was allocated by the Board of Directors of the Airport Authority Hong Kong (AAHK) for the construction of the new CAD Headquarters.

A design-and-build (D & B) approach is adopted for the construction of the new CAD Headquarters. Such an approach will have a merit by overlapping the initial ground works and detailed internal design stages, thus enhancing the efficiency of the construction programme.



新總部由三幅用地組成：東輝路以西的設施大樓(用地A)、東輝路以東的空管中心主大樓和辦公及培訓主大樓(用地B)，以及空管中心大樓以北的天線設備區。

新總部的建築樓面面積約為65 000平方米，淨作業樓面面積約為22 660平方米，其中約11 000平方米會用作新空管中心及相關設施；3 300平方米用作行政及規管辦公室；8 400平方米用作其他設施。新設施包括中央考試中心、飛機意外調查設施、多用途會議廳、教育徑及圖書館暨資源中心。

本處以可持續發展、環保及教育為新總部主要設計主題。各個分部集中於同一地點辦公，可精簡行政文書支援，提高生產力。大樓設計有足夠空間和彈性，供日後擴展，這對應付業界服務需求的長遠增長非常重要。

新總部達到香港建築環境評估法的最高環保驗證標準，即白金級別，設有多項環保設施/裝置。總部北端天線區會有大片草地，廣種植物，再加上設施大樓地下及一至三樓會栽種茂密草木，新總部地面及樓頂的綠化面積皆超過三成。民航處新總部將會是香港綠化程度最高的建築物之一。

The new headquarters will comprise three sites: the Facilities Building will be located to the west of Tung Fai Road (Site-A), the ATCC Building and the Office and Training Building will be located to the east of Tung Fai Road (Site-B), and the Antenna Farm will be located to the north of the ATCC Building.

The new CAD Headquarters will have a construction floor area in the order of 65 000 m<sup>2</sup> providing a total net floor area of approximately 22 660 m<sup>2</sup>. Of the 22 660 m<sup>2</sup>, about 11 000 m<sup>2</sup> will be assigned for the new Air Traffic Control centre (ATCC) and its associated facilities, 3 300 m<sup>2</sup> for administration and regulatory offices and 8 400 m<sup>2</sup> for other facilities. New facilities will include centralised examination centre, aircraft accident investigation facilities, multi-purpose auditorium, education path and a library-cum-resource centre.

Sustainability, environmental friendliness, and educational are the main design themes. The co-location of the various divisions will enhance productivity by streamlining administration and clerical support. Adequate space and flexibility for future expansion which are vital to sustain the long-term growth in service demand from the industry are also incorporated into the building design.

Under the Building Environmental Assessment Method in Hong Kong (HKBEAM), the new headquarters will be certified with the highest platinum rating. It will have environmental-friendly facilities/installations. The large area of lawn and plants at the Antenna Farm on the north end of the site and the lush vegetation on the ground and around level 1 to 3 of the Facilities Building will provide a total of over 30% site area landscaped on ground level and over 30% planted area on the roof. The New CAD Headquarters will be one of the "greenest" building premises in Hong Kong.

## 民航處計劃 The Civil Aviation Department Project



培訓設施方面，新總部設有演講室、工作室、考試室、多用途會議廳、會議室，可支援各式各樣的會議、研討會及培訓課程。此外，教育徑內有導賞展覽廳、空管中心展覽廊及機場看台，專為提高公眾對航空的興趣而設。圖書館暨資源中心亦可讓民航處與業界伙伴和其他政府機構交流資訊及資源。

With training facilities such as lecture rooms, workshops, examination rooms, multi-purpose auditorium and conference rooms, the new headquarters will be able to support a wide range of conferences, seminars and training courses. An education path consisting of a tour presentation and exhibition area, the ATCC viewing gallery, and an airport viewing deck is specially designed to promote aviation interest among the general public. The library-cum-resource centre will also allow CAD to share information and resources with the industry partners and government counterparts.

### 計劃進展

計劃雖然規模龐大兼且複雜，但得到民航處全體人員和決策局全力支持，再加上督導委員會領導有方，工作組又同心協力，計劃進展順利平穩。

### Project Progress

With the full support from the entire department and the policy bureau and through the capable steer of the Steering Committee and the concerted effort of the Project Team, the project had been making steady progress despite its scale and complexity.

二零零九年五月二十日，香港寶嘉有限公司獲批「設計及建造」合約，並於同日接收工地。建築署、民航處及承建商其後並肩合作，草擬大樓的建築設計圖則並落實定稿。地盤工程如期進行，並於二零零九年十一月二十七日舉行新總部奠基典禮。

The D & B contract was awarded to Dragages Hong Kong Limited on May 20, 2009, and the site was taken over by the contractor on the same day. Thereafter, effective coordination was maintained among Architectural Services Department, Civil Aviation Department and the contractor to prepare and finalise the preliminary architectural layout plan for the building. On-site works had also proceeded as scheduled and the foundation stone laying ceremony was held on November 27, 2009.

各屋宇裝備、空管系統電纜，以及行人和維修通道的橋接於二零一零年十一月二十六日晚上裝設。新總部大樓上蓋工程於二零一一年一月完成，而大樓的幕牆、內部裝修和屋宇裝備工程正全速進行。

The bridge connection, fitting all the building services, ATC systems cabling as well as the pedestrian and maintenance passageways, was erected at the night on November 26, 2010. And the superstructure of the new headquarters was completed in January 2011, and works on the curtain wall system, internal fitting out, and building services were at full steam.



根據建築時間表，整座新總部會在二零一二年第三季落成。至於空管中心大樓及相關設施，二零一二年第一季便可供安裝和測試新空管系統，以及培訓相關人員。新空管中心預計在二零一三年年底前啓用。

#### 更換空管系統

新空管系統共涉及14個主要系統、三個訓練設施和各種輔助部件及支援系統。新系統屬於最先進系統，安全功能和運作效率都會提高。設計方面亦同時兼顧系統擴展、互通能力、人類工程學、安全管理和環保等不同範疇。新系統能夠處理預期直至二零二五年在香港飛行情報區內的航班流量。

年內，新系統採購工作與新總部興建工程同步進行。二零一零年一月，控制塔模擬機首份合約批出。本處現正評審航空交通管理系統及主幹網絡標書，其餘項目會在二零一零至一一年度分階段招標。

According to the construction schedule, the entire new headquarters will be completed in the third quarter of 2012. For the ATCC building and related facilities, they will be ready in the first quarter of 2012 for the installation and testing of the replacement ATC systems and training of staff concerned. The new ATCC is planned to be commissioned by end 2013.

#### Replacement of ATC System

The replacement ATC system involves a total of 14 major systems, three training facilities and various ancillary components and sub-systems. When commissioned, the new system will be one of the most advanced systems with enhanced safety features and operational efficiency. System expandability, inter-operability, ergonomics, safety management and environmental issues were also taken into consideration in the design. It will be able to handle the projected traffic movements operating in the Hong Kong Flight Information Region up to year 2025.

During the year, the procurement of new systems was progressing simultaneously with the construction of the new CAD Headquarters. The first contract for the Control Tower Simulator was awarded in January 2010. In the meantime, the tender bids for the Air Traffic Management System and Communications Backbone were being evaluated. The rest of the tenders would be rolled out in phases in 2010-2011.