

立法會
Legislative Council

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Finance Committee of the Legislative Council

**Minutes of the 10th meeting
held at the Legislative Council Chamber
on Friday, 11 May 2007, at 3:00 pm**

Members present:

Hon Emily LAU Wai-hing, JP (Chairman)
Hon CHAN Kam-lam, SBS, JP (Deputy Chairman)
Hon James TIEN Pei-chun, GBS, JP
Hon Albert HO Chun-yan
Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP
Hon LEE Cheuk-yan
Hon Martin LEE Chu-ming, SC, JP
Dr Hon David LI Kwok-po, GBS, JP
Hon Fred LI Wah-ming, JP
Dr Hon LUI Ming-wah, SBS, JP
Hon Margaret NG
Hon Mrs Selina CHOW LIANG Shuk-ye, GBS, JP
Hon James TO Kun-sun
Hon CHEUNG Man-kwong
Hon Bernard CHAN, GBS, JP
Hon Mrs Sophie LEUNG LAU Yau-fun, SBS, JP
Hon LEUNG Yiu-chung
Hon SIN Chung-kai, JP
Dr Hon Philip WONG Yu-hong, GBS
Hon Jasper TSANG Yok-sing, GBS, JP
Hon Howard YOUNG, SBS, JP
Dr Hon YEUNG Sum
Hon LAU Chin-shek, JP
Hon LAU Kong-wah, JP
Hon LAU Wong-fat, GBM, GBS, JP
Hon Miriam LAU Kin-ye, GBS, JP
Hon CHOY So-yuk, JP
Hon Andrew CHENG Kar-foo
Hon TAM Yiu-chung, GBS, JP
Hon Abraham SHEK Lai-him, JP

Hon LI Fung-ying, BBS, JP
Hon Tommy CHEUNG Yu-yan, JP
Hon Albert CHAN Wai-yip
Hon Frederick FUNG Kin-kee, SBS, JP
Hon Audrey EU Yuet-mee, SC, JP
Hon Vincent FANG Kang, JP
Hon WONG Kwok-hing, MH
Hon LEE Wing-tat
Hon LI Kwok-ying, MH, JP
Dr Hon Joseph LEE Kok-long, JP
Hon Daniel LAM Wai-keung, SBS, JP
Hon Jeffrey LAM Kin-fung, SBS, JP
Hon Andrew LEUNG Kwan-yuen, SBS, JP
Hon Alan LEONG Kah-kit, SC
Hon LEUNG Kwok-hung
Dr Hon KWOK Ka-ki
Dr Hon Fernando CHEUNG Chiu-hung
Hon CHEUNG Hok-ming, SBS, JP
Hon WONG Ting-kwong, BBS
Prof Hon Patrick LAU Sau-shing, SBS, JP
Hon Albert Jinghan CHENG

Members absent:

Hon CHAN Yuen-han, JP
Hon WONG Yung-kan, JP
Hon Timothy FOK Tsun-ting, GBS, JP
Hon MA Lik, GBS, JP
Hon Ronny TONG Ka-wah, SC
Hon CHIM Pui-chung
Hon KWONG Chi-kin
Hon TAM Heung-man

Public officers attending:

Mr Alan LAI Nin, GBS, JP	Permanent Secretary for Financial Services and the Treasury (Treasury)
Miss Amy TSE, JP	Deputy Secretary for Financial Services and the Treasury (Treasury) 1
Mr Alfred FOK	Principal Executive Officer (General), Financial Services and the Treasury Bureau (The Treasury Branch)
Mr Michael WONG, JP	Deputy Secretary for Economic Development and Labour (Economic Development)
Miss Fiona LI	Assistant Secretary for Economic Development and Labour (Economic Development)

Mr Norman LO, AE, JP
Mr Anthony TAM

Director-General of Civil Aviation
Assistant Director-General of Civil
Aviation (Airport Standards)
Chief Electronics Engineer (Projects), Civil
Aviation Department

Mr Peter YEUNG

Clerk in attendance:

Ms Pauline NG

Assistant Secretary General 1

Staff in attendance:

Miss Becky YU
Mrs Mary TANG
Ms Alice CHEUNG
Mr Frankie WOO

Chief Council Secretary (1)1
Senior Council Secretary (1)2
Senior Legislative Assistant (1)1
Legislative Assistant (1)2

Action

Item No. 1 - FCR(2007-08)7

**RECOMMENDATION OF THE ESTABLISHMENT SUBCOMMITTEE
MADE ON 25 APRIL 2007**

The Chairman put the item to vote. The Committee approved the proposal.

Item No. 2 - FCR(2007-08)8

**RECOMMENDATIONS OF THE PUBLIC WORKS SUBCOMMITTEE
MADE ON 18 APRIL 2007**

2. The Chairman put the item to vote. The Committee approved the proposal.

Item No. 3 - FCR(2007-08)9

**CAPITAL WORKS RESERVE FUND
HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND
EQUIPMENT**

Civil Aviation Department

♦ **New Subhead “Replacement of air traffic control system”**

3. The Chairman informed members that the Panel on Economic Services (ES Panel) was consulted on the proposal at its special meeting on 26 February 2007.

4. Mr Jeffrey LAM, Chairman of ES Panel, said that while the Panel supported in principle the proposed replacement of air traffic control (ATC) system to meet the increased demand for ATC services arising from projected air traffic growth, the Administration was requested to take note of the following views -

- (a) there was a need to ensure that the new ATC system would use the most advanced technology in order to maintain Hong Kong's competitiveness as an international and regional aviation hub;
- (b) the design of the new ATC system should allow for a larger scope for system upgrading and enhancement so that it would not have to be replaced in the next 10 to 15 years; and
- (c) apart from replacing the ATC system, concerted effort with the relevant authorities should be made to improve the air traffic management in the Pearl River Delta (PRD) Region.

5. While not opposing to the proposal, Dr KWOK Ka-ki was concerned about the under-estimation in air traffic growth, which had led to the replacement of the existing ATC system within 10 years of service since this came into operation in 1998. He questioned if the new ATC system could support aircraft movements in 2025 as forecasted by the Airport Authority (AA). The Deputy Secretary for Economic Development and Labour (Economic Development) (DS(ED)) explained that the air traffic growth in the PRD Region was much higher than what was originally envisaged when the Hong Kong International Airport (HKIA) was planned. In order to maintain its competitiveness as an international and regional aviation hub, Hong Kong needed to enhance its ATC system to ensure the continued provision of efficient and effective ATC services in line with air traffic growth. The new ATC system was required to support the forecasted 490 000 aircraft movements a year in 2025, or a daily average of about 1 340 movements, and to meet the challenges of congested airspace in the PRD region. Given the long lead time for the planning of the new ATC system which was expected to commission in 2012, DS(ED) said that the existing system would have been in operation for almost 15 years and would be approaching the end of its usable life by then. The Director-General of Civil Aviation (DGCA) added that the existing ATC system came into operation in 1996 before the actual commissioning of HKIA in 1998 to allow sufficient time for training to ensure the provision of a safe and reliable service. The planning of the existing ATC system even took place earlier in 1992/93 and the most advanced system available at the time was selected. Between 1992 and the commissioning of the new system in 2012, there would be obviously great advancement of the new ATC system in terms of capacity, complexity and functionalities. Besides, the existing ATC system, if not replaced, would gradually lag behind those used by other ATC authorities in the vicinity and would inhibit inter-operability with other ATC systems.

6. Given the rapid technological advancement, Dr KWOK Ka-ki was concerned that the proposed ATC system might become outdated by the time it came into operation in 2012. Expressing similar view, Mr WONG Kwok-hing asked if the new ATC system could meet the international standards in air traffic control so that it would not lag behind other neighbouring cities. DGCA said that the Civil Aviation

Department (CAD) had conducted technical studies on ATC systems in other countries/cities, including Australia, European countries and Guangzhou. As the system to be adopted in Hong Kong would be the state-of-the-art technology and on a par with the most advanced systems adopted globally to ensure inter-operability and compatibility with other ATC systems in the neighbouring cities, it was unlikely that it would lag behind others upon its commissioning in 2012. With the funding approval, CAD would work out the user specifications for the new ATC systems. It was expected that the first tender document for the new ATC system project would be prepared in early 2008.

7. Mr WONG Kwok-hing further enquired if the new ATC system would be able to meet the new demand in ATC services arising from the commissioning of the third runway. DGCA explained that the new ATC system to be procured would be able to provide up to twice the handling capacity of the existing system and would be able to support the projected aircraft movements in 2025 as forecasted by AA as well as the increased demand arising from the possible commissioning of the third runway. In response to Mr WONG's question on the ability of new ATC system to detect windshear, DGCA said that the windshear detection system was installed and operated by the Hong Kong Observatory (HKO) and information on windshear would be conveyed to ATC controllers and aircraft pilots. CAD would ensure that the new ATC system would be compatible with the existing windshear detection system. Given that wind changes were crucial to air traffic control, Mr WONG Kwok-hing considered it necessary that the new ATC system should be able to detect windshear rather than relying on the information provided by HKO. DS(ED) explained that with the use of the new ATC system, there would be significant improvement in ATC services, particularly with regard to air-to-ground data communication. By way of data links, both air traffic controllers and aircraft pilots could be made aware of the latest changes in weather conditions.

8. Given the high system installation and commissioning cost of the new ATC system, Dr KWOK Ka-ki enquired how it compared with other similar installations. The Chief Electronics Engineer (Projects) (CEE(P)) explained that the installation and commissioning cost of \$352 million, representing about 25% of the total non-recurrent cost of the new ATC system, would include the expenses in relation to system delivery, installation, testing, operational and technical training on 17 new component systems. The cost was comparable to the installation and commissioning cost of similar equipment of high complexity which required detailed testing and extensive training.

9. Ir Dr Raymond HO said that without the replacement of the existing ATC system, Hong Kong would lag behind other ATC authorities in its vicinity. While supporting the proposed replacement, he stressed that efforts should be made to ensure that the operational and technical problems associated with the opening of HKIA in July 1998 would not recur, and that proper training on the operation of the new ATC system would be provided to staff. He also enquired about the estimated volume of aircraft movements in 2025.

10. In response, DGCA said that much had been learnt from the relocation of HKIA from Kai Tak to Chek Lap Kok and care would be taken to ensure that there would be a seamless transfer from the existing ATC system to the new one. A 20-month period would be allowed for the installation, testing and training of relevant staff while local engineers would be trained to oversee maintenance and repair of the new system. CEE(P) added that details on the requirements and compatibility of the new system would be set out in tender specifications. The suppliers would be requested to provide information on the maintenance of both hardware and software of the ATC system. As a result of the efforts made by maintenance and technical staff, which were subject to regular review, CAD had been able to provide a stable and high availability ATC system. While commending CAD for the provision of reliable and effective ATC services, Ir Dr Raymond HO enquired if the transfer of expertise in the maintenance and repair of the system would be set out in the contract to ensure that sufficient local staff was trained for the purpose. CEE(P) said that in the commissioning of HKIA at Chek Lap Kok in 1998, CAD had sent its staff to overseas suppliers for technical and operation training, testing and human-machine interface evaluation of the major systems procured. The procurement of the new ATC system would be subject to the principles of the World Trade Organization Agreement on Government Procurement and the requirement on the transfer of expertise on operations and maintenance of the ATC systems via local/overseas training would be set out in the tender specifications.

11. Noting that the Macao Airport relied heavily on ATC services provided by CAD which in turn had taken up a substantial part of Hong Kong's ATC capacity, the Chairman enquired about the charges payable by the Macao Government in this respect. DGCA said that flights arriving at or departing from the Macao Airport was charged for its usage of ATC services provided by CAD. Different levels of charges were applied in the provision of ATC services to flights arriving at or departing from HKIA and aircraft overflying the Hong Kong Flight Information Region, the latter would usually involve aircraft whose destinations and departure points were not HKIA such as Macao and Shenzhen. At the Chairman's request, the Administration undertook to provide information on the charges paid by the Macao Airport for the ATC services provided by CAD.

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Development of CAD Headquarters

12. Noting the Administration's proposal to develop a new CAD headquarters cum ATC Centre on the Airport Island to house the new ATC system and the various divisions of the Department, Dr KWOK Ka-ki enquired about the justifications for the need of the new headquarters and the use of the existing one after replacement. DGCA said that at present, the 700 staff of CAD, the majority of whom (more than 60%) were involved in air traffic management, were scattered in four different premises. Three of these were located on the Airport Island while one was located in the Central Government Office in Queensway. With a view to providing centralized operation and management as well as improving efficiency in air traffic control, the Administration had proposed to develop a new CAD headquarters cum ATC Centre on the Airport Island to house the new ATC system and all the CAD divisions. Mr WONG Kwok-hing expressed support for the development of CAD headquarters on the Airport Island as it would allow for centralized operation and more effective deployment of resources.

13. Prof Patrick LAU asked if local building professionals could participate in the design of the new CAD headquarters and if so, whether consideration would be given to holding an open design competition. DGCA said that the new CAD headquarters would have an area of 30 000 square metres and about two-thirds of the space would be used in the provision of ATC services. The design and construction cost of the new CAD headquarters would be around \$1.6 billion which was higher than most other projects of similar scale in view of the stringent requirements on security, fire prevention, temperature and air circulation control in the provision of ATC services. CAD would welcome participation from building professionals in the design and construction of the project. DS(ED) supplemented that there might not be sufficient time to hold an open design competition. Besides, the Architectural Services Department would assist in the design and construction of the new CAD headquarters.

14. Prof Patrick LAU further enquired if consideration would be given to the use of renewable energy in the new headquarters. DGCA answered that this would be considered but stressed that it would be essential to ensure that the power supply to the ATC system would be steady and not exposed to the risk of interruption.

Aircraft noise

15. Mr Albert CHAN said that he would object to the proposal as the increase in aircraft movements brought about by the new ATC system would exacerbate aircraft noise, which had seriously affected residents in Tsuen Wan, Sam Tseng, Tsing Lung Tau, Tsing Yi and Tung Chung, particularly at night when some of the cargo flights generated noise exceeding 80 decibels. Although he had raised the matter with CAD, no action had been taken to relieve the problem apart from some minor changes to the flight paths. DGCA had also failed to provide information on the number of aircraft movements which were permissible under the 25 Noise Exposure Forecast (NEF) contour stipulated for HKIA. With the replacement of the ATC system and the resultant increase in air traffic, the affected residents under the flight paths would inevitably have to suffer more. He was disappointed that the Administration's paper had only focused on the economic gains arising from increased air traffic with no attention being paid to the level of aircraft noise which the affected residents would be exposed to.

16. While acknowledging members' concerns about the problem of aircraft noise, DS(ED) said that this would have to be weighed against the importance of the aviation industry to the economic development of Hong Kong. In the planning and design of HKIA, care had been taken to provide for the protection of the community against excessive aircraft noise and a stringent criterion of 25 NEF contour had been set. Measures had been taken by CAD to reduce the impact of aircraft noise on the affected community as far as practicable. DGCA said that when HKIA was first planned, an assessment had been made on the noise impact of aircraft when the airport was operating to its full capacity. As for the noise impact at night, the noise impact of one flight operated during the night-time was assessed as 16 times that of one flight operated in the day-time. The assessment indicated that the noise impact was within the criterion of 25 NEF contour and HKIA had since been operating within its permissible limit. Following the commissioning of HKIA in 1998, CAD had taken active measures to reduce the nuisance associated with aircraft noise. It was worth

noting that the number of complaints received in 2006 was 446 and there were only 90 complaints received in the first four months in 2007.

17. Mr Albert CHAN however pointed out that the noise impact assessment studies made in the 1980s was flawed and had underestimated the noise levels of aircraft movements at HKIA. The noise problem had worsened with the increased number of cargo flights at night time. He considered it necessary for the Administration to provide the number of aircraft movements which were permissible under the 25 NEF contour stipulated for HKIA before funding approval for the proposal was given to ensure compliance with the noise limits. DGCA indicated that that when HKIA was operating at full capacity, its total cargo load would be nine million tonnes and its total passenger trips would be 89 million per year. The said capacity had yet to be reached as HKIA was only operating at a maximum cargo load of about 3.5 million tonnes and passenger trips of 45 million per year. Therefore, the stipulated 25 NEF contour would unlikely be exceeded. He added that there were difficulties in providing the number of aircraft movements which were permissible under the 25 NEF contour because noise levels differed with the type of aircraft and their flight paths. Besides, the changes in flight paths arising from the commissioning of the third runway had yet to be assessed. AA would be conducting a technical study on the operation of the third runway and related issues, such as environmental impact, would have to be taken into consideration.

18. Prof Patrick LAU agreed with Mr Albert CHAN that noise impact should be considered as part of sustainable development. Given that airplanes were becoming bigger nowadays, he enquired about the impact of the trend on the extent of noise problem. DGCA replied that the airplanes were designed to have larger carrying capacity nowadays as in the case of Airbus 380. However, larger capacity did not necessarily mean more noises since all new designs of aircraft would need to pass noise tests and certification to ensure compliance with the stipulated standards. As from the year 2000, more stringent noise standards in line with international practice were applicable to airplanes operating to Hong Kong. In addition, noise mitigating measures were adopted in various phases of flight to further reduce the noise impact. It was expected that with the advancement in aircraft technology, the noise standards could be further tightened to reduce aircraft noise.

19. Ir Dr Raymond HO said that with the advancement in aircraft technology, the noise-reducing ability of aircraft engines had been improved. He hoped that more efforts would be made by the aviation industry to reduce aircraft noise as he did not like to see Hong Kong's competitiveness as an international and regional aviation hub being compromised by aircraft noise.

20. The Chairman put FCR(2007-08)9 to the vote. 29 members voted for the proposal and one member voted against the proposal. The individual results were as follows:

For :

Mr James TIEN Pei-chun

Mr LEE Cheuk-yan

Mrs Selina CHOW LIANG Shuk-yee

Ir Dr Raymond HO Chung-tai

Mr Martin LEE Chu-ming

Mr James TO Kun-sun

Action

- 9 -

Mr CHEUNG Man-kwong
Mr SIN Chung-kai
Mr Howard YOUNG
Mr LAU Kong-wah
Mr TAM Yiu-chung
Ms LI Fung-ying
Ms Audrey EU Yuet-mee
Mr WONG Kwok-hing
Mr Jeffrey LAM Kin-fung
Dr KWOK Ka-ki
Mr CHEUNG Hok-ming
Prof Patrick LAU Sau-shing
(29 members)

Mrs Sophie LEUNG LAU Yau-fun
Mr Jasper TSANG Yok-sing
Dr YEUNG Sum
Ms Miriam LAU Kin-yee
Mr Abraham SHEK Lai-him
Mr Tommy CHEUNG Yu-yan
Mr Vincent FANG Kang
Mr LI Kwok-ying
Mr Andrew LEUNG Kwan-yuen
Dr Fernando CHEUNG Chiu-hung
Mr WONG Ting-kwong

Against :

Mr Albert CHAN Wai-yip
(1 member)

21. The Committee approved the proposal.
22. The meeting was adjourned at 3:58 pm.

Legislative Council Secretariat
26 July 2007