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**Public Works Subcommittee of the Finance Committee
of the Legislative Council**

**Minutes of the 5th meeting
held in the Conference Room A of Legislative Council Building
on Friday, 21 December 2007, at 2:30 pm**

Members present:

Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP (Chairman)
Hon Alan LEONG Kah-kit, SC (Deputy Chairman)
Hon Fred LI Wah-ming, JP
Hon Mrs Selina CHOW LIANG Shuk-yee, GBS, JP
Hon Bernard CHAN, GBS, JP
Hon CHAN Kam-lam, SBS, JP
Hon SIN Chung-kai, SBS, JP
Hon Jasper TSANG Yok-sing, GBS, JP
Hon Howard YOUNG, SBS, JP
Hon LAU Kong-wah, JP
Hon Emily LAU Wai-hing, JP
Hon CHOY So-yuk, JP
Hon Timothy FOK Tsun-ting, GBS, JP
Hon Abraham SHEK Lai-him, JP
Hon Albert CHAN Wai-yip
Hon LI Kwok-ying, MH, JP
Dr Hon KWOK Ka-ki
Hon CHEUNG Hok-ming, SBS, JP
Prof Hon Patrick LAU Sau-shing, SBS, JP

Members absent:

Hon James TO Kun-sun
Hon CHAN Yuen-han, SBS, JP

Dr Hon Philip WONG Yu-hong, GBS
Hon LAU Wong-fat, GBM, GBS, JP
Hon Miriam LAU Kin-ye, GBS, JP
Hon Andrew CHENG Kar-foo
Hon LEE Wing-tat
Hon Daniel LAM Wai-keung, SBS, JP
Hon TAM Heung-man

Public officers attending:

Mr Joe C C WONG, JP	Deputy Secretary for Financial Services and the Treasury (Treasury) ³
Mr Enoch LAM Tin-sing, JP	Deputy Secretary for Development (Works) ²
Dr Michael CHIU Tak-lun, JP	Deputy Director of Environmental Protection (1)
Mr Davey CHUNG	Principal Assistant Secretary for Financial Services and the Treasury (Treasury) (Works)
Mr LAW Hin-wing	Chief Estate Surveyor (Acquisition), Lands Department
Mr YUE Chi-hang, JP	Director of Architectural Services
Mr HUI Chiu-kin	Chief Property Services Manager (2), Architectural Services Department
Mr WONG Chee-keung, JP	Director of Drainage Services
Mr John CHAI Sung-veng, JP	Director of Civil Engineering and Development
Dr Ellen CHAN Ying-lung	Assistant Director (Environmental Infrastructure), Environmental Protection Department
Mr WAI Chi-sing, JP	Director of Highways
Mr LAM Yuen-kwong	Chief Engineer (Works), Home Affairs Department
Mrs Dorothy MA CHOW Pui-fun	Deputy Secretary-General (1), University Grants Committee
Miss Gloria LO	Principal Assistant Secretary (Health) ² , Food and Health Bureau
Mr Paul DEAKIN	Chief Manager (Capital Works), Hospital Authority
Mrs Michelle WONG YAU Wai-ching	Principal Assistant Secretary (School Development), Education Bureau
Ms Mable CHAN	Principal Assistant Secretary (Infrastructure and Research Support), Education Bureau
Mr Benjamin YUNG Po-shu	Principal Education Officer (Curriculum Development) ² , Education Bureau
Mr Raymond SY Kim-cheung	Assistant Secretary (Assessment and Support), Education Bureau
Dr LEE Kin-wang	Head (Estates, Health and Safety Division), Vocational Training Council
Miss CHAN Shuk-ye	Senior Executive Officer (Planning), Social Welfare Department
Mr CHAN Chi-chiu, JP	Director of Water Supplies

Ms Caroline FAN Mei-hing	Chief Systems Manager (E-Government Policy and Development Division), Office of Government Chief Information Officer
Mr Kenneth WONG Hung-keung	Chief Civil Engineer, Transport and Housing Bureau
Ms Grace LUI Kit-yuk	Deputy Secretary for Security (3)
Ms Catherine YIP Wai-sim	Assistant Secretary (D)2, Security Bureau
Mr Charles CHOW Chi-ping	Project Director (2)(Acting), Architectural Services Department
Mr CHOI Lap-yiu	Deputy Government Property Administrator, Government Property Agency
Mr LAU Wing-lai	Chief Engineer (Port Works), Civil Engineering and Development Department
Ms Sharon HO Ho-shuen	Principal Assistant Secretary (Transport)5 Transport and Housing Bureau
Mr CHEUNG Chi-hoi	Chief Engineer (1) (Hong Kong-Zhuhai-Macao Bridge Hong Kong), Highways Department
Mr David TO Kam-biu	Assistant Commissioner (Planning), Transport Department
Mr CHU Shun-wah	Chief Highway Engineer (Works)(Acting), Highways Department
Mr Esmond LEE Chung-sin, JP	Deputy Secretary for Transport and Housing (Transport)4
Mr Francis CHENG Kong-chung	Principal Assistant Secretary (Transport)9, Transport and Housing Bureau
Mr Norman LO Shung-man, AE, JP	Director-General of Civil Aviation
Mr Anthony TAM Lai-hon, JP	Assistant Director-General (Project), Civil Aviation Department
Mr CHUI Wing-wah	Chief Engineer (Harbour Area Treatment Scheme), Drainage Services Department
Dr Malcolm James BROOM	Assistant Director (Water Policy), Environmental Protection Department
Mr CHAN Kin-kwong	Chief Engineer (Drainage Projects), Drainage Services Department
Miss Amy WONG Pui-man	Principal Assistant Secretary (Higher Education), Education Bureau
Mr CHAN Wing-tak	Chief Technical Adviser (Subvented Projects), Architectural Services Department
Prof WONG Yuk-shan, BBS, JP	Vice President for Administration and Business, The Hong Kong University of Science and Technology
Mr Mike HUDSON	Director of Facilities Management, The Hong Kong University of Science and Technology

Clerk in attendance:

Ms Rosalind MA	Senior Council Secretary (1)8
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Staff in attendance:

Ms Pauline NG	Assistant Secretary General 1
Mr Anthony CHU	Council Secretary (1)2
Ms Alice CHEUNG	Senior Legislative Assistant (1)1
Mr Frankie WOO	Legislative Assistant (1)2

Action

Capital Works Reserve Fund Block Allocations

**PWSC(2007-08)61 Block allocations for Heads 701 to 711 under the
Capital Works Reserve Fund**

The Chairman advised members that the Administration had consulted the Panel on Information, Technology and Broadcasting on the proposed allocation under *Head 710 - Computerization* for 2008-2009 at the meeting on 12 November 2007 and provided supplementary information on the allocation under *Head 710* for the past seven years pursuant to members' request. Panel members also requested the Administration to provide in due course a comparison of the information technology (IT) manpower provision for the government of Hong Kong and those for governments of other jurisdictions. Panel members noted the Administration's explanation that the increase of provision from \$540 million in 2007-2008 to \$600 million in 2008-2009 was mainly attributable to the increased number of approved projects and new bids. Government bureaux and departments had also formulated new computerization project proposals to make use of IT more extensively to improve public services and to attain greater efficiency and productivity. The Panel supported the proposal in principle. The Chairman also advised members that an information paper on the funding proposals under this item had been circulated to the Panel on Development on 20 November 2007.

2. The item was voted on and endorsed.

Head 703 – Buildings

**PWSC(2007-08)62 9GB Construction of boundary-crossing
facilities at Shenzhen Western Corridor
under the “co-location” arrangement -
land development**

3. The Chairman advised that the Panel on Security was consulted on this proposal on 6 November 2007. Mr LAU Kong-wah, Chairman of the Panel on Security, apprised the meeting that members had made enquiries on the compensation for the removal of oyster beds, the fee for use of waters, the land premium foregone for the returned land, the total reclaimed area and the reclaimed area occupied by the Hong Kong Port Area (HKPA), reasons for leasing but not

purchasing the relevant land, the annual rental of HKPA and the environmental standards adopted in the environmental impact assessments of the project. On 6 December 2007, the Administration had provided further information to the Panel about planned development for the locations of the existing oyster breeding rafts in Lau Fau Shan, the reclamation and soft ground treatment works costs, the components of the fee for use of waters, information on the law and area relating to the various items of land acquisition cost, the content, calculation method and applicable rates of the item of "returned land". Panel members had no objection for the Administration to submit the funding request to the Public Works Subcommittee (PWSC).

4. Mr Howard YOUNG stated support for the proposal and considered that it was reasonable for the Hong Kong Special Administrative Region Government (HKSARG) to bear the land development cost (LDC) for the land occupied by the Hong Kong Clearance Area (HKCA) of the Shenzhen Bay Port (SBP). He sought information about the cost comparison between the works undertaken by the Shenzhen Municipal People's Government (SZG) for reclamation and seawall construction works at SBP and similar works, should these be undertaken by HKSARG.

5. The Deputy Secretary for Security (3) (DS(3), SB) said that according to the assessment of the Civil Engineering and Development Department (CEDD), the cost for reclamation and related works for SBP was reasonable and within the range of the unit cost for reclamation and seawall construction works undertaken in Hong Kong. DS(3), SB further advised that the \$600 million land acquisition and clearance cost under the current proposal was worked out by making reference to the standard rates as prescribed in the relevant Mainland laws and regulations. She pointed out that land requisition cost for the same area of land in Hong Kong (using Zone C land for which ex-gratia compensation was paid at 50% of the basic rate of \$311 per square foot in 2001) would amount to around \$900 million. The Chief Engineer (Port Works), CEDD added that the construction works undertaken in Hong Kong and in the Mainland were subject to different regulatory requirements and technical standards and hence direct cost comparison of the construction works would not be practicable. The unit costs of different construction works under this proposal fell within the higher and lower limits of the unit costs of similar reclamation projects in Hong Kong over the past 12 years. For instance, the unit cost for the construction of seawalls for this proposal was well below the higher limit of that in Hong Kong and the unit cost for reclamation was close to the lower limit of that in Hong Kong.

6. While appreciating the overall design of the Shenzhen Western Corridor, the Chairman noted that the three travellers installed at the HKPA were discontinuous and in short length of only three to four metres each. From his observation, these travellers were seldom used by cross-boundary passengers. In this connection, the Chairman asked the Administration to consider making improvement to the design of these travellers to facilitate passenger traffic, say, by making reference to the travellers at venues such as the Hong Kong International Airport (HKIA). In response, the Project Director (2)(Acting),

Architectural Services Department said that the travellers were designed with gaps in-between to facilitate passengers (notably elderly and people with disabilities) alighting at the transport interchange as well as at bus stops located along the way, to make their way to the Passenger Terminal Building in a convenient and speedy manner.

7. Responding to Prof Patrick LAU's enquiry on the cost for the construction of the boundary crossing facilities and the original estimates for LDC, the Director of Architectural Services (D Arch S) said that the funding proposal for the boundary crossing facilities, including the Passenger Terminal Building, had been approved under another project in 2003. DS(3), SB added that LDC was retained in Category B when the funding application for the boundary crossing facilities was submitted to the Finance Committee (FC) in 2003. The Administration did not make any estimates for LDC but had studied the audited figures on LDC provided by SZG and confirmed the amount of LDC to be borne by HKSARG.

8. The item was voted on and endorsed.

Head 706 – Highways

PWSC(2007-08)64 825TH Tuen Mun - Chek Lap Kok Link and Tuen Mun Western Bypass

9. The Chairman advised that the Panel on Transport was consulted on this proposal on 23 November 2007. Panel members supported the implementation of the project and urged the Administration to take forward each stage of the project works expeditiously to meet the transport needs in the Northwest New Territories and the demand of cross-boundary traffic. Panel members also urged the Administration to study in depth measures to mitigate the environmental and traffic impacts arising from the construction works. Members also requested the Administration to consider upgrading the carriageway from dual two-lane to dual three-lane and provide an additional rail link to meet the transport needs in the area. As the proposed motorways would be connected to the Hong Kong-Zhuhai-Macao Bridge and SBP, members called on the Administration to formulate appropriate measures to facilitate cross-boundary vehicles traveling between Hong Kong and Shenzhen.

10. Mr CHEUNG Hok-ming said that Members of the Democratic Alliance for the Betterment and Progress of Hong Kong supported the proposal. Mr CHEUNG was concerned about the provision of suitable entrances/exits to the section between Hung Shui Kiu and Area 40 of Tuen Mun to facilitate residents' use of the new motorway. He also urged the Administration to conduct a study on the provision of rail link to meet the transport needs of residents in the area. In reply, the Director of Highways (DHy) advised that entrances/exits at Lam Tei, Mong Hau Shek and Tsing Tin were planned for the aforesaid section, which would be connected to the centre of Tuen Mun. As regards the provision of rail link, the Administration considered that traffic demand at the moment did not

justify the construction of a rail link in concurrence with the Tuen Mun – Chek Lap Kok Link and Tuen Mun Western Bypass. DHy pointed out that a railway link, if required, should preferably be connected to the east of the Airport Island and would have different considerations from the proposed road link in terms of design requirements and alignment. The Administration would study the need for a rail link in future when the need arose.

11. The item was voted on and endorsed.

PWSC(2007-08)65 145TB Extension of footbridge network in Tsuen Wan

12. The Chairman advised members that an information paper provided by the Administration on the project had been circulated to the Panel on Transport on 15 November 2007.

13. Mr Albert CHAN strongly welcomed the implementation of the proposal for extension of the footbridge network in Tsuen Wan to meet the needs of local residents. Pointing out that the planning of the proposed footbridge network had taken quite a long time due to public objections to the design, Mr CHAN considered the present design of the project, which was a major improvement compared with the previous ones, acceptable. Mr CHAN added that the design adopted by this footbridge should be used as a baseline for the future design of footbridges in Hong Kong. Mr CHAN also cautioned that special attention should be paid to the design of footbridges in Hong Kong so as to avoid undesirable design in the form of colossal concrete structure, which would cause a sense of compactness to pedestrians and would also become an eyesore to the public. Noting that the estimate of the present project was more than 10% higher than that of other footbridges, he queried whether the provision for footbridges under previous projects were on the low side thus compromising their aesthetic standards. He urged the Administration, by making reference to this footbridge, to review the policy on the aesthetic standards for future footbridge projects in Hong Kong. Mr CHAN supported the implementation of this project.

14. Prof Patrick LAU echoed Mr Albert CHAN's view. Prof LAU welcomed the proposed footbridge extension to provide a convenient access for pedestrians. He was concerned about the long planning process for the proposed footbridge and asked the Administration to streamline the procedures with a view to expediting similar projects in the future. In reply, DHy said that while he was unable to give a full account of the causes for the long planning process for this particular project, the Administration would strive to streamline the procedures for planning of public works projects for expeditious implementation, where possible.

15. The item was voted on and endorsed.

Head 703 – Buildings**PWSC(2007-08)63 75KA New Civil Aviation Department
headquarters**

16. The Chairman advised that the Panel on Economic Development was consulted on this proposal on 26 November 2007. Panel members in general supported the proposal to construct a new Civil Aviation Department (CAD) headquarters on the Airport Island to house the new Air Traffic Control (ATC) system and all functional divisions of CAD, which were scattered at different locations at present. In anticipation of the rapid growth in air traffic, Panel members hoped that the Administration would ensure flexibility for future expansion in the new CAD headquarters to cater for future requirements for system replacement and staff accommodation. Given that the new CAD headquarters would be located on the land-side of HKIA, Panel members suggested that the Administration should implement appropriate security measures to ensure operational safety of the ATC centre. As HKIA was facing keen competition from airports in the neighbouring region, Panel members called on the Administration to ensure that any increase in the charges for ATC services arising from the construction of the new CAD headquarters would not have any adverse impact on the competitiveness of Hong Kong as an aviation hub. Panel members also urged the Administration to take forward the outlook design of the new CAD headquarters building to blend in well with the neighbouring environment and buildings.

Design for the CAD headquarters

17. Responding to Prof Patrick LAU's enquiry about details of the building design, D Arch S advised that the project would be delivered through a design-and-build (D&B) contract under which a concept plan and necessary functional requirements for the building would be provided in the tender document for tenderers to submit their designs in their bids. Prof LAU was concerned that given the cost constraint imposed by the approved project estimate (APE), the D&B approach might not be conducive to the quality of project design as tenderers might compromise design quality in an attempt to submit a bid within the APE. He sought information on measures to achieve cost control and quality of project design while meeting the requirements of the project proponents at the same time.

18. D Arch S advised that previous public works projects adopting the D&B approach had been successful. He appreciated the importance of making an appropriate project estimate for D&B projects. He pointed out that experience had shown that in general, for D&B projects for the construction of office buildings, the tender prices were within the APE for projects, such as the Independent Commission Against Corruption Headquarters. Nevertheless, there was one D&B project (i.e. the Tseung Kwan O Sports Ground) that the Administration had applied to FC for an increase in the APE to meet the higher tender price, which was attributable to the fact that the nature of leisure and sports facilities would enable a wider flexibility in the design approach of the project. As regards the current

proposal of the new CAD headquarters, D Arch S assured members that the Administration was confident that the building project could be delivered at a reasonable cost within the APE through the D&B approach.

Space requirement for the CAD facilities

19. Referring to the net operational floor area (NOFA) for the new CAD headquarters in paragraph 3 of the Administration's paper, Ms Emily LAU sought information on the NOFA for the existing ATC system, functional divisions of CAD and other facilities. Ms LAU expressed concern about the lack of a clear comparison between the existing space provision for CAD and that in the new CAD headquarters in the Administration's paper and enquired about the justifications for the increase in space requirement in the new headquarters.

20. In reply, the Director-General of Civil Aviation (DG of CA) and the Deputy Secretary for Transport and Housing (Transport)4 (DS(T)4, THB) said that the total NOFA for all the existing CAD facilities was about 9 191 m² with a breakdown of 3 068 m² for offices, 3 422 m² for ATC facilities and 2 701 m² for other facilities. The new CAD headquarters building would have a total NOFA of about 22 775 m² with a breakdown of 3 428 m² for offices, 10 923 m² for ATC facilities and 8 424 m² for other facilities. DG of CA advised that the 10 923 m² for ATC facilities comprised about 9 000 m² to meet the forecast demand in air traffic up to 2025 and an additional space of 2 000 m² reserved for upgrading or replacement of the new ATC system in the future to cater for expansion beyond 2025 so that construction of another new building would not be required. DG of CA further advised that the opportunity was taken to relocate CAD's functional divisions which were currently scattered at various locations, including Queensway Government Offices and a number of premises on the Airport Island. The co-location of functional divisions in the new CAD headquarters would enhance productivity and improve the services to the aviation industry. This would only take up about 18% of the total NOFA of the new building.

21. Noting that the provision for CAD's office accommodation was slightly over 3 000 m² currently and in the new CAD headquarters, Ms Emily LAU raised query about the figures on the area of office accommodation to be released upon the commissioning of the new headquarters in paragraph 12 of the Administration's paper. She doubted why the area to be released far exceeded 3 000 m². In reply, DS(T)4, THB said that paragraph 12 presented the financial implications upon commissioning of the project. About 1 730 m² of rented office accommodation and four rented car parking spaces located at the Airport Freight Forwarding Centre could be released, and about 1 040 m² of rent-free office accommodation at the Passenger Terminal Building would be returned to the Airport Authority Hong Kong. Moreover, about 5 700 m² of government owned office accommodation and 38 government owned car parking spaces could be released for use by other departments. DG of CA added that the total area of accommodation to be released exceeded 3 000 m² as the 5 700 m² of government owned office accommodation to be released was not all used as CAD offices. Part of the accommodation currently housed the ATC facilities, support facilities and

ATC Centre.

22. Noting the Administration's response that information on NOFA for CAD's existing functional divisions and ATC system had not been provided in the Administration's paper, Ms Emily LAU criticized the Administration's presentation of information as confusing and incomplete. Ms LAU opined that the Administration should have provided with clarity necessary information on the space provision for existing CAD facilities and that for the new headquarters to facilitate members' understanding. The Chairman and Mr Abraham SHEK shared her view. Mr Abraham SHEK expressed support for the proposal but considered that the Administration should provide further information to justify the increase in space requirements in the new CAD headquarters. The Chairman said that presentation of figures should preferably be in tabular form to facilitate members' perusal in consideration of the funding submission.

Admin

23. At the request of Ms Emily LAU and Mr Abraham SHEK, the Administration agreed to provide the following further information before the relevant FC meeting –

- (i) a comparison between NOFA of CAD's functional divisions (including the ATC system) and that of the new CAD headquarters, with a breakdown by the type of facilities (such as offices, ATC facilities and other facilities) and information on the locations of existing facilities; and
- (ii) justifications for the additional areas required, including but not limited to information on the area required to cope with future expansion arising from the growth in air traffic.

Capacities of the existing and new ATC systems and manpower requirements for air traffic control

24. While appreciating the need for a new ATC system to cope with the growth in air traffic, Dr KWOK Ka-ki expressed concern whether the need for replacement of the ATC system within a short period of time i.e. only nine years after HKIA's opening in 1998, was a result of the Administration's poor planning. Dr KWOK considered it a waste of resources for the existing ATC system to be replaced within such a short time.

25. DG of CA advised that when the existing ATC system was designed in the early 1990s, it was the state-of-the-art facility at that time. He pointed out that the existing ATC system had been performing well at HKIA since 1998 and had additional capacity to cope with the demand of the aviation industry in the near future, with an expected increase in aircraft movements from an average of 55 per hour at present to 58 per hour in 2009. To prepare for the opening of HKIA in 1998, the existing ATC system had been commissioned in 1996 for air traffic control staff to familiarize with the system operation. To cope with the traffic growth, the existing 22 control positions would be increased to 27 in the coming five years,

which would be the limit for the existing system. While the growth in air traffic had been faster than the forecast made during the design of the existing ATC system back in the 1990s, DG of CA reiterated that at the time the current system was planned, CAD had already reserved about 20% additional space for system expansion. To meet the growing air traffic volume up to 2025, a new ATC system occupying an area of around three times the size of the existing ATC Centre would be required. He pointed out that an additional space of 2 000 m² was reserved in the present proposal for further expansion to cater for the growth in aircraft movements. An assessment would be made in 2020 to determine the timing for an upgrade and/or the next replacement of the ATC system.

26. Dr KWOK Ka-ki sought details of the flexibility for further expansion of the ATC system and the capacity of the enhanced system in handling the growth in air traffic. Ms Emily LAU also expressed concern about the capacity for expansion of the new ATC system and questioned whether it was adequate for the system to have a capacity to cope with the growth in air traffic up to 2025 only. In response, DG of CA said that the projected annual aircraft movements was 490 000 by 2025 and the new ATC system was designed to cater for the growth in air traffic up to 500 000 aircraft movements each year by 2025. Apart from these aircraft movements, there was also a great demand for en-route navigation service from flights passing through the Hong Kong Flight Information Region, of which the growth in demand would be hard to estimate given the factors involved, such as business growth and the number of new airports in the region. For instance, the demand for en-route navigation service had increased by almost 100% since HKIA's opening in 1998, while the number of flights landing/taking off at HKIA only increased by about 70%. Having said that, DG of CA believed that the flexibility allowed for expanding the capacity of the ATC system could cater for the air traffic growth up to at least around 2035.

27. In response to Ms Emily LAU's enquiry about the additional manpower requirements for operation of the new ATC system, DG of CA replied that for the next five years, resources had been earmarked for creation of about 40 new technical and air traffic control posts in the ATC division of CAD. At Ms LAU's request, the Administration agreed to provide information on the existing manpower provision for the ATC division of CAD and the additional manpower required for the operation of the new ATC system before the relevant FC meeting.

Admin

Backup ATC system

28. Prof Patrick LAU enquired about the disposal of CAD's existing accommodation upon the commissioning of the new CAD headquarters. In reply, DG of CA said that a period of about one year would be allowed for the installation, testing and implementation of the new ATC system. There would also be six months for the existing and new ATC systems to operate in parallel and the existing ATC system would then be upgraded and used as a backup thereafter. The premises vacated upon the commissioning of the new CAD headquarters would be returned to the Government Property Agency for re-allocation to other users departments or to cope with requests from other aviation industry players, if any.

29. Prof Patrick LAU expressed concern about the substantial scale of the backup system. He doubted whether a backup had been provided for the existing ATC system and if so, whether the backup was of a similar scale. In this connection, Prof LAU requested the Administration to provide justifications for keeping of the existing ATC system as a backup system.

30. DG of CA said that it was necessary to provide backups for critical systems such as the ATC system to ensure provision of service, as prolonged ATC system disruption/failure would affect air traffic flow and undermine flight safety. Backup facilities had been provided to the existing ATC Tower and Centre at HKIA. He pointed out that similar backup was provided in other airports in the region, such as the airports in Beijing, Shanghai and Guangzhou and that in Australia. The large number of aircraft movements at HKIA warranted a backup system of adequate capacity and CAD considered the keeping of the existing ATC system as backup after commissioning of the new system an appropriate arrangement. The distance between the location of the new ATC system and the backup would provide adequate safeguard in the event of emergency such as fire hazard affecting the operation of the main system. As to the provision of backup for the existing ATC system, DG of CA said that this was provided with a smaller scale at the lower level of the Backup ATC Complex.

31. Mr Abraham SHEK questioned the need for a backup of a much larger scale in the new ATC system than the existing one. He also sought information on the usage of the existing backup at the Airport Island since the opening of HKIA in 1998. In response, DG of CA advised that the ATC back-up system had never been activated since the opening of HKIA in 1998 but CAD conducted monthly drills to prepare for switching to the backup system in case of emergency. At Mr SHEK's request, the Administration agreed to provide, before the relevant FC meeting, justifications for keeping the existing ATC system as a backup for the new system.

Admin

Cooperation with airports in the Pearl River Delta region

32. Noting that the idea of establishing a central ATC centre for the Pearl River Delta (PRD) region might be pursued in the future as a means to address increasing air traffic congestion and facilitate flight scheduling, Mr Howard YOUNG enquired whether the Administration had taken into account the development of air traffic infrastructure as well as air traffic growth in the region in planning the current project. In reply, DG of CA said that air traffic in the PRD region was very busy, with average daily aircraft movements for the airports in the region exceeding 2 000. DG of CA advised that there had been on-going discussions in the past few years on measures to streamline the management of air traffic in the region. Nevertheless, a number of difficulties would need to be overcome if a central ATC centre for the entire region were to be established and further discussion among relevant parties would be needed in this regard. He recapped that the new ATC system was designed to cater for the growth in air traffic up to 500 000 aircraft movements each year and stressed that CAD had taken into consideration the growth in air traffic in the PRD region in projecting

the air traffic growth for the development of the new ATC system.

Auditorium and conferences facilities

33. Noting that a multi-purpose auditorium and conference facilities would be provided in the new CAD headquarters, Ms Emily LAU enquired whether these additional state-of-the-art facilities for CAD would be open to other bureaux/departments so as to maximize its utilization. In reply, DG of CA said that the new auditorium and conference facilities would provide venues for organizing meetings and group briefings for industry partners and staff, and hosting conferences in association with the International Civil Aviation Organization (ICAO). He confirmed that the new auditorium would be made available for use by other bureaux/departments. Ms LAU suggested that a designated bureau/department, for example, the Financial Services and the Treasury Bureau, should coordinate the booking of the new facility with a view to maximizing its utilization and keeping proper records of the uses.

34. Referring to the various new facilities in the new CAD headquarters set out in paragraph 6 of the Administration's paper, Dr KWOK Ka-ki was concerned about their cost implications, in particular the cost-effectiveness of providing these facilities for CAD in terms of the frequency of using such facilities to meet CAD's operational requirements. Pointing out that conference facilities were available at the AsiaWorld-Expo and the airport hotel, Dr KWOK doubted whether it would be more cost-effective for CAD to rent the required facilities from venues outside instead.

35. DG of CA said that venues available at the AsiaWorld-Expo and the airport hotel were generally too big for most of CAD's functions/conferences. Moreover, CAD had encountered a number of difficulties in renting outside conference facilities for its functions. For instance, an additional cost of around \$300,000 was incurred for renting a sound system in a hotel when CAD hosted an international conference in 2004. Additional manpower resources had been involved to clear up and re-decorate the rented venues daily for other hotel functions at night time and reinstate it into a meeting configuration in the following morning. With its own conference facilities, CAD would be able to play a more active role in hosting seminars, workshops and training courses in association with the ICAO thereby further enhancing the status of Hong Kong as an international and regional aviation hub.

Admin

36. At Dr KWOK Ka-ki's request, the Administration undertook to provide the following information before the relevant FC meeting -

- (i) the cost implications of the new facilities as set out in paragraph 6 of the Administration's paper; and
- (ii) the functions/workshops organized by CAD in the past five years which required use of an auditorium and conference facilities similar to those to be provided in the new CAD

headquarters as set out in paragraph 6(b) of the Administration's paper.

37. The item was voted on and endorsed. Ms Emily LAU expressed her reservation on this proposal and requested that the item be voted on separately at the relevant FC meeting.

Head 704 – Drainage

PWSC(2007-08)68 352DS Harbour Area Treatment Scheme, stage 2A - construction of advance disinfection facilities at Stonecutters Island sewage treatment works

38. The Chairman advised members that the Panel on Environmental Affairs was consulted on this proposal on 26 November 2007. Panel members were concerned about the marine ecological risk resulting from the use of chlorination/dechlorination for disinfection under the Harbour Area Treatment Scheme (HATS) Stage 2A and requested the Administration to monitor closely the marine ecology before and after the application of the disinfection process. As the re-opening of the closed Tsuen Wan beaches was contingent upon the completion of the local sewerage programme and the commissioning of the advance disinfection facilities (ADF) under HATS Stage 2A, Panel members urged the Administration to complete both projects within the same timeframe. The Administration was requested to provide the daily amount of chlorine to be used for disinfection and to put in place an effective mechanism to monitor the quality of the receiving waters, under which the chlorination/dechlorination process could be stopped where necessary. Panel members also sought information on technologies, such as nanotechnology, which the Administration had considered before deciding on the use of chlorination/dechlorination for disinfection under HATS. The required information provided by the Administration was at Enclosure 3 to the Administration's paper for the funding submission.

39. Noting that about 20 tonnes of chlorine would be used daily for the disinfection process under HATS Stage 2A, Ms Emily LAU expressed concern about the possible marine ecological risk resulting from the discharge of large volume of chemical into the harbour.

40. In reply, the Chief Engineer (Harbour Area Treatment Scheme), Drainage Services Department (CE(HATS), DSD) pointed out that the daily chlorine consumption for effluent disinfection should be viewed in context with the amount of effluent treated. Given the tremendous amount of sewage discharge (current daily volume of about 1.4 million m³) from the Stonecutters Island Sewage Treatment Works (SCISTW), CE(HATS), DSD advised that the chlorine dosage rate was only about 11 to 15 mg/L. On the choice of disinfection technology, CE(HATS), DSD said that DSD had made reference to the disinfection practices adopted by 132 STWs in 24 coastal cities around the world under the

Environmental Impact Assessment (EIA) study. The use of chlorination/dechlorination for disinfection was quite a common practice in other cities. Following a series of comprehensive, objective and scientific investigations, the EIA report concluded that the environmental impact of the project could be controlled within the prescribed limits and would not affect the marine ecology. Within the EIA study period, the Administration had held four rounds of consultation meetings with professional, environmental and academic groups to share information and investigation results, to gauge their views and to address their concerns, before finalizing the EIA report which was subsequently endorsed by the Advisory Council for the Environment. The Assistant Director (Waste Policy), Environmental Protection Department added that under the chlorination/dechlorination process, the chlorinated effluent would also be dechlorinated before discharge into receiving waters. As such, the disinfected effluent discharged would not pose any threats to the marine ecology.

41. Responding to Ms Emily LAU's enquiry on the recurrent cost of the chemical used for disinfection, the Director of Drainage Services (DDS) referred to Enclosure 3 to the Administration's paper on the annual recurrent cost for the project and advised that the cost for chemical was estimated to be \$82 million each year.

42. Noting the findings of survey on disinfection practices of 132 STWs in other cities, Dr KWOK Ka-ki was concerned whether the surveyed STWs were comparable to SCISTW in terms of plant scale and sewage flow capacity. In response, DDS advised that chlorination/dechlorination was used in some large STWs. By way of illustration, the capacity of the largest secondary plant using chlorination/dechlorination was that in Deer island, Boston which had a flow capacity of over 1 800 000 m³ per day. The disinfection process had been adopted for years even before the treatment plant was upgraded from primary to secondary. At the request of Dr KWOK, DDS undertook to provide further information on the survey findings for members' reference before the relevant FC meeting.

Admin

43. Ms Emily LAU expressed concern about the monitoring of marine ecology after the commissioning of ADF. Noting that the Administration would take necessary measures to rectify the problem should exceedance of discharge limits be identified during the monitoring, Ms LAU enquired about the possible measures to be taken. In response, CE(HATS), DSD advised that the measures to be taken would hinge on the nature and extent of the problem identified. Where extreme circumstances so warranted, immediate stopping of the chlorination/dechlorination process could be arranged. Nevertheless, stopping of the disinfection process would result in the discharge of effluent without disinfection. CE(HATS), DSD pointed out that the chlorination/dechlorination technology was flexible and reliable, allowing suitable adjustment to the process to cope with different circumstances promptly. Ms Emily LAU called on the Administration to ensure effective operation of the monitoring mechanism so that prompt actions would be taken to rectify any problem which might give rise to marine ecological risk.

44. Dr KWOK Ka-ki considered the construction of a biological STW under HATS Stage 2B the desirable option for sewage treatment in the long run, while ADF under Stage 2A should be a transitional measure. In this connection, Dr KWOK enquired about the Administration's commitment to taking forward Stage 2B. DDS assured members that the Administration was committed to the construction of the biological STW the implementation programme of which would be subject to the review to be carried out in 2010/2011. He advised that the Administration had already commenced the selection process to engage consultant for the study on the co-use of the identified site adjacent to SCISTW. DDS nevertheless pointed out that Stages 2A and 2B would operate as a comprehensive system for sewage treatment under HATS.

45. The item was voted on and endorsed.

PWSC(2007-08)69 138CD Decking of Jordan Valley nullah in Kwun Tong, Rambler Crest nullah in Tsing Yi, Flower Market Road nullah in Mong Kok and Tonkin Street nullah in Sham Shui Po

46. The Chairman advised members that an information paper provided by the Administration on the project had been circulated to the Panel on Development in October 2007.

47. Noting that the land obtained from the decking of nullahs would be used for greening and amenity purposes in Mong Kok and Kwun Tong and for footpath widening purpose in Sham Shui Po, Prof Patrick LAU expressed concern about the design of the greening works. In response, DDS advised that landscape plans had been prepared for the greening works of the nullah decking in Mong Kok and Kwun Tong. At the request of Prof LAU, DDS agreed to provide the landscape plans to members for information before the relevant FC meeting. As to the widening of the Tonkin Street footpath, DDS advised that the Transport Department and the Highways Department would take forward the proposed works in due course.

Admin

48. Prof Patrick LAU opined that in taking forward the nullah decking works under the current proposal, the Administration should also explore the feasibility of installing necessary public utilities underground on both sides of the nullahs. Prof LAU pointed out that this could reduce the need for future road openings and minimize disturbance to the public. In reply, DDS said that installation of public utilities was not part of the current proposal. The problem of uncertainties of the existence and alignment of the underground utilities had to be resolved before Prof LAU's suggestion could be pursued. At the request of Prof LAU, DDS undertook to examine the feasibility of installation of public utilities along the nullahs.

Admin

49. Responding to Ms Emily LAU's enquiry on the typical section of nullah decking works in Flower Market Road in Mong Kok, DDS advised that the

existing nullah wall would be retained for preservation of the existing trees with roots growing on the nullah wall. DDS pointed out that the design of the nullah decking works would allow room for the trees to grow. Prof Patrick LAU suggested that in addition to preserving the trees, the Administration should take into consideration the visibility of the nullah wall with trees growing on top in the design of the decking works, where possible.

50. Ms Emily LAU and Mrs Selina CHOW were both concerned about the effectiveness of the decking works in removing the existing odour nuisance to community in the vicinity of the nullahs. Ms LAU was of the view that decking of the nullahs might prevent the spreading of odour but could not treat the source of pollution generating the odour. Mrs CHOW opined that more resources might be required for the continued enforcement actions against illegal discharge into nullahs for removal of the odour in the long run. They both urged the Administration to make continued efforts in mitigating the odour nuisance to the community.

51. DDS pointed out that completed nullah decking works such as the one at Mong Kok Road in 2006 had proved to be effective in reducing the odour nuisance. Apart from undertaking nullah decking works, DDS advised that staff of DSD and the Environmental Protection Department (EPD) would conduct regular inspections and take enforcement actions where illegal discharge to nullah was identified. The Deputy Director of Environmental Protection (1) (DD(1), EPD) supplemented that EPD and DSD took joint enforcement actions pursuant to the provision of the Water Pollution Control Ordinance (WPCO) (Cap. 358). Through the concerted efforts of the two departments, the number of complaints on odour nuisance from residents in the vicinity of the three nullahs in question had reduced significantly in the past two to three years. Having said that, DD(1), EPD assured members that there was no reason for the Administration's complacency and it was committed to keeping up efforts in the enforcement of WPCO.

52. In response to Mrs Selina CHOW's enquiry about the estimated cost of \$6.2 million for environmental mitigation measures, DDS advised that the provision was for the implementation of temporary measures during the works period to minimize the short-term environmental impacts, such as the use of temporary noise barriers to reduce noise generation.

53. The item was voted on and endorsed.

Head 708 – Capital Subventions and Major Systems and Equipment

PWSC(2007-08)66 11EL Extension to the existing Academic Building, The Hong Kong University of Science and Technology

54. The Chairman advised members that an information paper provided by the Administration on the proposal was circulated to the Panel on Education in

December 2007.

55. Mr Abraham SHEK declared that he was a member of the Council of the Hong Kong University of Science and Technology (HKUST).

56. While appreciating the need of HKUST for additional space and facilities to support the implementation of the four-year undergraduate programme under the new academic structure for senior secondary education and higher education, Dr KWOK Ka-ki expressed concern about the oversight mechanism to ensure proper cost control of the proposed project and to prevent recurrence of project overspending during the initial set up of HKUST. In this connection, Dr KWOK noted with concern that the building services cost amounted to \$21.2 million and enquired whether the estimated cost was within reasonable limits compared with similar projects of other University Grants Committee (UGC)-funded institutions.

57. In reply, the Vice President for Administration and Business, the Hong Kong University of Science and Technology (VP(A&B), HKUST) said that HKUST had learnt from the experience of its initial set up and had exercised prudent cost control for building projects since then. He pointed out that HKUST had demonstrated its ability in cost control of other building projects carried out in the past years such as the construction of student hostels and staff quarters. VP(A&B), HKUST said that HKUST attached importance to taking forward the current proposal in a prudent manner. A dedicated working group comprising representatives of the senior teaching and administrative staff of HKUST had been set up for this purpose. As regard the estimates for building services, VP(A&B), HKUST advised that the estimates for the project had been worked out in full compliance with the standard provisions for UGC-funded institutions. The estimated construction unit cost, represented by the building and building services costs, was \$11,796 per m² of the construction floor area (CFA), which was comparable to that of similar projects of UGC-funded institutions.

58. The Deputy Secretary-General (1), University Grants Committee (DS-G(1), UGC) advised that UGC and the Architectural Services Department (ArchSD) would oversee the expenditure of the project. UGC, on the advice of ArchSD, would examine the tender document of the building project, monitor the progress of construction works and vet the final project expenses after the completion of works. As such, the expenditure of the project would be subject to proper oversight by UGC and ArchSD apart from the internal cost control mechanism of HKUST.

59. Dr KWOK Ka-ki opined that thought should be given to the implementation of environmentally friendly and/or energy conservation measures in the design of the extension to the existing Academic Building of HKUST (the extension building). Being an institution of higher education with expertise in science and technology, Dr KWOK was of the view that HKUST should take the lead in incorporating the concept of energy conservation in its building projects. He however could not find any information on such measures in the sectional plan or the content of the paper for the current proposal. Ms Emily LAU expressed

similar concern and pointed out that energy conservation design was worth-pursuing even at a higher capital cost given the potential benefits to the environment and the savings in energy consumption in the long run.

60. In reply, VP(A&B), HKUST said that HKUST attached importance to environmental protection and had set up a green campus committee for this purpose. He pointed out that teaching staff from the relevant academic areas were participating in the dedicated working group for the current proposal to give advice on measures to achieve energy conservation and efficiency in the project design. For instance, roof-top gardens and green balconies would be provided to facilitate the use of natural light, improve circulation and air quality.

Admin 61. Dr KWOK Ka-ki opined that to facilitate members' consideration of the environmentally friendly and/or energy conservation measures to be implemented and the effectiveness of these measures in energy savings, HKUST should provide further information on the measures as well as the estimated figures on the energy savings before the relevant FC meeting. Ms Emily LAU echoed Dr KWOK's view and requested that the financial implications of implementing these measures should also be provided for members' reference. In this connection, Ms LAU also Admin requested that similar information on environmentally friendly and/or energy Admin conservation measures be provided for **PWSC(2007-08)63** on the proposed new CAD headquarters considered at the meeting earlier on.

62. Noting the 55% NOFA/CFA ratio for the extension building, Prof Patrick LAU considered the ratio on the low side and questioned whether a higher ratio of say, 70% could be achieved through improvement in the building design. In reply, the Director of Facilities Management, the Hong Kong University of Science and Technology advised that the 55% NOFA/CFA ratio for the extension building was attributable to the considerable circulation area to be provided as virtual corridors in the library, which was counted towards the building's CFA. Prof Patrick LAU called on HKUST to maximize the utilization of space and achieve a higher NOFA/CFA ratio by improving the layout design of the building.

63. The item was voted on and endorsed. Ms Emily LAU requested that this item be voted on separately at the relevant FC meeting.

64. The meeting ended at 4:40 pm.