

立法會

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Public Works Subcommittee of the Finance Committee of the Legislative Council

**Minutes of the 11th meeting
held in the Chamber of Legislative Council Building
on Thursday, 7 May 2009, at 3:00 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 CHAN Kam-lam, SBS, JP

Hon Andrew CHENG Kar-foo

Hon TAM Yiu-chung, GBS, JP

Hon Abraham SHEK Lai-him, SBS, JP

Hon Albert CHAN Wai-yip

Hon WONG Kwok-hing, MH

Hon CHEUNG Hok-ming, SBS, JP

Prof Hon Patrick LAU Sau-shing, SBS, JP

Hon KAM Nai-wai, MH

Hon Cyd HO Sau-lan

Hon Starry LEE Wai-king

Hon CHAN Hak-kan

Hon Paul CHAN Mo-po, MH, JP

Hon Tanya CHAN

Hon WONG Kwok-kin, BBS

Hon WONG Yuk-man

Hon IP Kwok-him, GBS, JP

Hon Mrs Regina IP LAU Suk-ye, GBS, JP

Dr Hon Samson TAM Wai-ho, JP

Members absent:

Hon James TO Kun-sun
Hon LAU Wong-fat, GBM, GBS, JP
Hon Miriam LAU Kin-ye, GBS, JP
Hon Timothy FOK Tsun-ting, GBS, JP
Hon LEE Wing-tat
Dr Hon LEUNG Ka-lau

Public officers attending:

Mr Joe C C WONG, JP	Deputy Secretary for Financial Services and the Treasury (Treasury) ³
Mr MAK Chai-kwong, JP	Permanent Secretary for Development (Works)
Mr Raymond YOUNG, JP	Permanent Secretary for Development (Planning and Lands)
Mr Benny WONG Yiu-kam, JP	Deputy Director of Environmental Protection (1)
Miss Sandra LAM	Principal Assistant Secretary for Financial Services and the Treasury (Treasury) (Works)
Mr Kenneth CHEN Wei-on, JP	Under Secretary for Education
Ms Amy WONG Pui-man	Principal Assistant Secretary (Higher Education), Education Bureau
Mrs Dorothy MA	Deputy Secretary-General (1), University Grants Committee Secretariat
Mr Peter LO Kwok-ho	Senior Architect (Subvented Projects), Architectural Services Department
Professor WONG Yuk-shan	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
Mr Andrew NOWAK-SOLINSKI	Associate Director of Facilities Management, The Hong Kong University of Science and Technology
Professor Paul LAM Kwan-sing	Vice-President (Student Affairs), City University of Hong Kong
Dr Ellen KO LAW Yin-lan	Vice-President (Finance and Administration), City University of Hong Kong
Mr WONG Ka-yu	Director of Facilities Management, City University of Hong Kong
Mr CHAN Tsz-kin	Associate Director of Facilities Management, City University of Hong Kong
Ms Sharon HO Ho-shuen	Principal Assistant Secretary (Transport) ⁵ , Transport and Housing Bureau
Mr John CHAI Sung-veng, JP	Director of Civil Engineering and Development

Mr KWONG Hing-ip, JP	Project Manager (Kowloon), Civil Engineering and Development Department
Mr Norman HEUNG Yuk-sai	Deputy Project Manager (Kowloon), Civil Engineering and Development Department
Ms YING Fun-fong	Chief Engineer (Transport Planning), Transport Department
Mr Roy TANG Yun-kwong, JP	Deputy Secretary for the Environment
Mr Stephen CHAN, JP	Director of Electrical and Mechanical Services
Mr Alfred SIT Wing-hang	Assistant Director (Energy Efficiency), Electrical and Mechanical Services Department

Clerk in attendance:

Ms Debbie YAU	Chief Council Secretary (1)6
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Staff in attendance:

Mrs Constance LI	Assistant Secretary General 1
Ms Angel SHEK	Senior Council Secretary (1)1
Ms Alice CHEUNG	Senior Legislative Assistant (1)1
Mr Frankie WOO	Legislative Assistant (1)2

Action

The Chairman reported that a total of 95 capital works projects of an amount of \$49.941 billion had been endorsed by the Public Works Subcommittee (PWSC) in the 2008-2009 session so far.

**Head 708 - Capital Subventions and Major Systems and Equipment
PWSC(2009-10)25 13EL 701-place student residences, The Hong Kong University of Science and Technology**

2. The Chairman advised members that the proposal was to upgrade 13EL to Category A at an estimated cost of \$201.3 million in money-of-the-day prices (MOD prices) for the construction of 701-place student residences by The Hong Kong University of Science and Technology (HKUST) within its campus in Clear Water Bay.

3. The Chairman said that the Administration had consulted the Panel on Education on the proposal at the meeting on 9 March 2009. The Panel was in support of the proposal but requested HKUST to explore the possibility of building more student hostels in order to fully meet HKUST's shortfall in publicly-funded student hostel places. Given the remote location of HKUST, Panel members also pointed out that student hostels should preferably be located within its campus.

The Panel requested the Administration to provide information on the green features of the project, the disposal of the construction waste generated, and the average construction cost per square metre of the proposed project. The Administration provided the requested information to the Panel on 24 April 2009.

4. Mr Albert CHAN expressed support for the proposal because hostel life was an integral part of university education. While noting that greening features would be adopted at open space and periphery retaining walls of the HKUST, Mr CHAN was concerned if vertical greening would also be implemented for the proposed buildings. Professor WONG Yuk-shan, Vice President for Administration and Business, HKUST advised that there would be greening at rooftops, and solar hot water system would be installed for energy conservation.

5. Noting that there would still be a shortfall of 31 hostel places at HKUST after the completion of the proposed project, Professor Patrick LAU asked whether the mechanical and electrical plants on the top floor could be relocated so that more space could be made available for constructing an additional floor to provide adequate hostel places.

6. Professor WONG Yuk-shan of HKUST responded that the capacity of the two hostel blocks was subject to site and construction constraints such as height limitation and plot ratio. The most feasible way of increasing the capacity would be to enlarge the footprint of the building which would encroach on the slope nearby. However, as this would require a revised building design, additional tree felling and significant geotechnical works, and the need to seek statutory approval for the new outline zoning plan, HKUST had estimated that the project would be delayed by six to nine months. After careful consideration, HKUST had decided not to pursue this option but to explore other options such as commissioning joint hostels with other UGC-funded institutions.

7. Mr Andrew NOWAK-SOLINSKI, Associate Director of Facilities Management, HKUST supplemented that the height limit was governed by the outline zoning plan and the lease conditions of the land grant, and the proposed hostel blocks had already been designed to the maximum height permitted at 8-storey high. Professor Patrick LAU remarked that HKUST should consider applying to the Town Planning Board for relaxing the height limit.

8. Mr Albert CHAN expressed concern about the inadequacy of hostel places for students of the Hong Kong Baptist University (HKBU) and asked whether the Administration would help resolve the shortage problem.

9. The Under Secretary for Education (USED) stressed that the Administration had all along been concerned about the provision of adequate hostel places for all students of UGC-funded institutions. To alleviate the shortage in hostel provision, the Administration had been examining the feasibility for constructing joint hostels to accommodate students from different UGC-funded institutions. A joint hostel project in Tseung Kwan O was being considered to provide hostel places for students of HKUST and HKBU. The feasibility study of

the project had been completed and the Administration would soon consult the Sai Kung District Council on the project. USED added that, subject to funding approval, the joint hostel project would be completed by year 2013.

10. The item was voted on and endorsed.

PWSC(2009-10)26 23EJ Student hostel, phase 4 (700 places), City University of Hong Kong

11. The Chairman advised members that the proposal was to upgrade 23EJ to Category A at an estimated cost of \$182 million in MOD prices for the construction of student hostel, phase 4 by the City University of Hong Kong (City U) within its campus in Kowloon Tong. The Administration consulted the Panel on Education on 16 April 2009.

12. Ms Cyd HO, Chairman of the Panel on Education, advised that Panel members were in support of the proposal but they expressed concern about the shortfall of over 1 200 hostel places for City U students even after completion of the proposed project. Some Panel members had suggested redeveloping or converting vacant Government premises into student hostels for the UGC-funded institutions. In this connection, Ms Cyd HO asked whether the vacant Police quarters near City U, the vacant public housing estates at Shek Kip Mei or the Kowloon East Barracks at Renfrew Road could be converted to student hostels for City U.

Admin

13. USED advised that most of the currently vacant Government premises already had planned use. For the Cheung Sha Wan Police Quarters, USED said that the land had been earmarked for developing a public housing estate and for reprovisioning of a sub-standard secondary school. Nevertheless, he would convey Ms Cyd HO's suggestions for the consideration of the relevant departments.

14. Professor Patrick LAU considered that the proposed building design should take into account the need to maximize its capacity to solve the shortfall problem for hostel places. Noting that the design of the proposed building had provided for an "opening", he queried the need for such "opening" as this could be used to provide more floor area.

15. Mr KAM Nai-wai concurred with Professor Patrick LAU's view and urged City U to consider revising the design to create more hostel places to meet the shortfall. He asked whether it would be possible to increase the floor area of the proposed building.

16. Professor Paul LAM, Vice-President (Student Affairs), City U responded that the "opening" of the building was to maximize the reception of natural light and introduce natural ventilation in the hostel blocks. The design had balanced the needs to introduce green features in the building and to provide more hostel places

to meet the shortfall. City U had striven to provide 700 student hostel places by obtaining approval from the Town Planning Board to relax the height limit, and utilizing the maximum gross floor area (GFA) under a plot ratio of 3.19.

17. Professor Patrick LAU noted that City U had made efforts to utilize lands available within the campus; but there was still a shortfall of over 1 200 hostel places after completion of the proposed project. He urged the Administration to assist to resolve the problem through better planning of land use.

18. The Permanent Secretary for Development (Planning and Lands) remarked that land use planning was subject to competing social demands, and the Administration/Town Planning Board would endeavour to strike a proper balance to meet various needs, including educational needs.

19. Mr KAM Nai-wai asked about the provision of places under the joint hostel project for the students of City U. USED advised that the Administration had been examining the feasibility of constructing joint hostels in Ma On Shan and Tseung Kwan O to accommodate students from different UGC-funded institutions. City U would participate in the joint hostel project in Ma On Shan.

20. The item was voted on and endorsed.

Head 707 – New Towns and Urban Area Development PWSC(2009-10)23 785TH Trunk Road T2

21. The Chairman advised that the proposal was to upgrade part of 785TH to Category A at an estimated cost of \$133.6 million in MOD prices to engage consultants to undertake the investigation, design and the associated site investigation works of Trunk Road T2. An information paper on the proposed works had been circulated to the Panel on Transport on 16 March 2009.

22. Mr CHAN Kam-lam expressed support for the proposal. He enquired whether the impact of the construction works of Trunk Road T2 on the water quality in the Kwun Tong typhoon shelter (KTTS) nearby and the operation of KTTS would be studied under the proposed investigation works. The Director of Civil and Engineering Development (DCED) advised that Trunk Road T2 was a Designated Project under Schedule 2 of the Environmental Impact Assessment Ordinance (Cap. 499) requiring an Environmental Permit for construction. An Environmental Impact Assessment study would be conducted as part of the investigation and design works to assess the potential environmental impacts, including the impact on the operation of KTTS and its water quality. The study would also look into the associated treatment of contaminated sediments and other environmental mitigation measures. DCED said that as around 70% of the space at KTTS was designated for sheltering of vessels, there would be room for undertaking the construction works at or near KTTS without causing too much disruption to its operation.

23. Mr CHAN Kam-lam conveyed concerns of some lot owners in Cha Kwo Ling (CKL) that the alignment of the trunk road in the form of tunnel might affect the redevelopment rights of their existing land lots. The Project Manager (Kowloon), Civil Engineering and Development Department (PM(K), CEDD) said that the issue was being studied separately under the approved investigation and preliminary design of Tseung Kwan O – Lam Tin Tunnel (TKO-LT Tunnel) which would be connected with the proposed Trunk Road T2. The Administration would undertake consultation with CKL residents concerned in taking forward the projects.

24. Professor Patrick LAU noted that the proposed Trunk Road T2 would connect the Central Kowloon Route and TKO-LT Tunnel in the form of an immersed tube tunnel. He opined that the tunnel portion should be extended to reduce the length of the surface road section and the traffic impact on adjacent developments, such as the Kai Tak Development (KTD). He enquired whether better alignment options would be explored during the investigation study.

25. DCED said that the Administration had conducted a comprehensive review on KTD which covered Trunk Road T2. A preliminary design study had been carried out for Trunk Road T2, including its alignment options, taking into account the need to minimize the impact on adjacent areas. Referring to Enclosure 1 to PWSC(2009-10)23, he pointed out that a substantial length of Trunk Road T2 under the current design would already be constructed in the form of an immersed tube tunnel. However, it was necessary to connect the tunnel with Central Kowloon Route at one end and TKO-LT Tunnel at the other end of the trunk road. PM(K), CEDD added that the alignment in question would be further reviewed as appropriate under the proposed investigation and detailed design works.

26. In response to Professor Patrick LAU's concern, DCED advised that the proposed investigation and design works for Trunk Road T2 would ascertain whether temporary reclamation for the proposed works would be required.

27. The item was voted on and endorsed.

Head 705 – Civil Engineering

PWSC(2009-10)24 45CG District cooling system at the Kai Tak development

28. The Chairman advised that the proposal was to upgrade 45CG to Category A at an estimated cost of \$1,671 million in MOD prices for the provision of a District Cooling System (DCS) at KTD. The Panel on Environmental Affairs (EA Panel) had been consulted on the proposed works at the meeting on 15 December 2008.

29. The Chairman further said that the EA Panel did not object to the Administration submitting the proposal to the PWSC for consideration. However, there was a concern about the substantial increase in estimated capital cost for the

DCS project (i.e. from \$655 million at 2001 price level to \$1,402 million under the current proposal (excluding provision for price adjustment)). Panel members noted that based on the study conducted by financial advisors, it would take about 27 years to recover the cost, assuming that 50% of the total planned public and private non-domestic air-conditioned floor area would connect to DCS. Some members considered the Administration's assumption of 50% usage overly conservative. As DCS could achieve a maximum annual saving in electricity consumption up to 85 million kWh, and reduction of 59 500 tonnes of carbon dioxide emission per annum, Panel members suggested that the tariff should be set at an attractive level to encourage more private users to connect to the system, which would help shorten the cost recovery period for DCS. Panel members also opined that consideration should be given to conducting studies on the feasibility of extending DCS to other districts in the form of a pilot scheme.

Cost and tariff level of district cooling system

30. Mr CHAN Kam-lam commended the proposed DCS which would help promote environmental-friendly and sustainable development in Kai Tak. However, he was concerned about the number of private users as it would have impact on the cost and tariff level. He suggested that the Administration should mandate the use of DCS by private non-domestic developments at the KTD, so as to ensure an optimal number of users for the DCS and cost-effectiveness of the system. To allow for flexibility, individual buildings could apply for disconnection to the system with reasons.

31. The Deputy Secretary for the Environment (DS(Env)) explained that apart from significant environmental benefits (i.e. a reduction of 35% and 20% respectively in electricity consumption as compared to traditional air-cooled air conditioning systems and individual water-cooled air conditioning systems using cooling towers), the DCS would also reduce building cost by 5% to 10% and the floor area required to house their own chillers and the associated electrical equipment by 80%. With these incentives and market forces, it was envisaged that DCS would still attain a high subscription rate even on a voluntary basis. In view of uncertainties in the tender prices for the proposed works, and the level of electricity tariff for using traditional air-cooled air-conditioning systems, it was considered prudent and fair not to mandate the adoption of DCS at this stage. He added that mandatory use of DCS by way of legislation was uncommon in other economies. In reply to Professor Patrick LAU, DS(Env) said that savings of about 5% to 10% in building cost could be achieved when compared to adoption of individual water-cooled air-conditioning systems using cooling towers.

32. DS(Env) advised that based on the study conducted by the Government's consultant, it would take about 27 years to recover the cost, on the assumption that 50% of the total planned public and private non-domestic air-conditioned floor area would connect to DCS. As about 35% of the air-conditioned floor area in KTD would be public developments which would all connect to DCS, it would require the participation of only another 15% from private developments for recovering the capital and operating costs over the project life. The Director of

Electrical and Mechanical Services (DEMS) added that the cost-recovery period would be shortened if the subscription rate exceeded 50%.

33. Mr CHAN Kam-lam remained concerned and requested the Administration to reconsider the strategy to enhance the subscription rate to bring about a lower tariff. He opined that it would be a waste of resources if only 50% of the public and private non-domestic users would connect to DCS.

34. In response to the enquiry of Mr CHAN Kam-lam and Mr KAM Nai-wai, DS(Env) explained that the proposed works would be implemented by a "Design, Build and Operate" (DBO) contract to provide a northern chiller plant, a southern underground chiller plant, underground seawater pumphouse, associated seawater pipelines, chilled water pipe networks and connection facilities (including heat exchangers) at user buildings at KTD. The cost for connection to the proposed DCS would be borne by private users concerned.

35. Mr KAM Nai-wai requested for more details on the tariff level. Mr Abraham SHEK said that he was concerned that a shortfall in the actual subscription rate might result in a high tariff rate. He asked the Administration to provide information on the estimated fee levels for different subscription rates.

36. Mr CHAN Kam-lam enquired about the mechanism for monitoring tariff adjustment to ensure viability of the DCS. Mr WONG Kwok-hing enquired about the contract arrangement with the service providers, such as whether a fixed rate of annual return would be prescribed enabling adjustment to the tariff when the income fell short of a prescribed level, as in the case of some build-operate-transfer (BOT) tunnels.

37. DS(Env) said that, unlike a BOT project, DCS would be operated in the DBO mode. Hence the operator would not be entitled to a rate of return as the DCS would be owned by the Government. Subject to the Legislative Council's approval of the enabling legislation, the recurrent costs for DCS (including the service fee payment to the contractor and other operating costs) would be offset by the DCS tariff charges to users. The remaining proceeds would be channelled to the General Revenue. The Administration was currently conducting a consultancy study on the development of a tariff scheme and charging schedule. The legislative proposals had yet to be drawn up to set out the charging structure, tariff levels and tariff adjustment mechanism, and the relevant panel of the Legislative Council would be consulted in due course. DS(Env) added that the actual tariff level would be affected by factors including the outturn tender prices for the proposed capital works and market forces.

38. DEMS said that the Administration had made reference to overseas practices (e.g. Japan, Singapore and Malaysia) in implementing DCS. Many overseas cities were using DCS with proven effectiveness, and the tariff levels of DCS in these cities were generally lower than that for traditional air-cooled air-conditioning systems. The Administration would determine the tariff scheme in the light of the unique environment of Hong Kong. It was a common practice to

determine the tariff levels based on the required capacity of individual user buildings and the actual consumption of chilled water. He added that the consultancy study on the development of a tariff scheme was expected to be completed by end 2009.

39. Mr Abraham SHEK opined that as the situation in Hong Kong might be different from overseas places, the Administration should provide the financial analysis on the operation of DCS and its viability before seeking funding approval. Mr KAM Nai-wai expressed concern that the DCS would face competition from the traditional air-cooled air-conditioning systems and individual water-cooled air-conditioning systems using cooling towers.

Admin 40. DS(Env) assured members that the tariff level of the proposed DCS at KTD would not be higher than the charges for traditional air-cooled air-conditioning systems and individual water-cooled air conditioning systems using cooling towers. DEMS added that the power company would not adjust electricity tariff for particular users in order to compete with DCS services. The Administration was requested to provide, before the relevant FC meeting, a rough financial analysis for the implementation of DCS, and the estimated fees for private non-domestic developments at the KTD to make connection to and subscribe for the service of the proposed DCS as compared with the charges under traditional air-cooled air-conditioning systems and individual water-cooled air-conditioning systems using cooling towers.

Design capacity and system reliability

41. Professor Patrick LAU expressed concern that it would be difficult to work out the design capacity of the DCS if connection to the system would be on a voluntary basis. He enquired whether the design capacity would, in accordance with the assumed subscription rate, only cater for up to 50% of the total planned public and private non-domestic air-conditioned floor area.

42. DS(Env) said that the design capacity would be able to accommodate a 100% subscription rate in the 1.7 million square meters (m²) of the total planned public and private non-domestic air-conditioned floor area which accounted for around 43% of the total construction floor area of KTD (i.e. around 3.8 million m²). As the remaining areas were residential developments which seldom adopted central air-conditioning, it would not be necessary or cost-effective for them to make connection to the DCS. DEMS added that the DCS would be developed and commissioned for operation in three phases to suit the demand of air-conditioning by different groups of developments. The first phase would complete at the end of 2012 while the second and third phases would be completed by end 2016 and end 2021.

43. Mr CHAN Kam-lam opined that the design capacity of the distribution pipes should take into account a growing subscription rate and the cost-effectiveness for upgrading the capacity in future. DEMS said that the piping network under the current design would cater for the maximum design capacity,

and only additional chiller plants had to be installed to accommodate future needs and demand.

44. In response to Mr KAM Nai-wai's enquiry on the contingency measures and backup supply in case of system failure, DEMS said that the piping network was specially designed to ensure the reliability of the system so that the supply of chilled water would not be disrupted even if defects occurred to one part of the network.

Environmental impacts of DCS

45. Mr Albert CHAN expressed concern about the environmental impact of DCS on the receiving waters, the effects of the increase in temperature of the receiving waters arising from seawater discharges from DCS, especially in the nullah at Kai Tak where the water flow was slow.

46. The Assistant Director (Energy Efficiency), Electrical and Mechanical Services Department (AD(EE),EMSD) said that according to the findings of a consultancy study on seawater discharges from DCS based on a slow tidal flow, the temperature in the seawater discharges would only have minimal impacts on the receiving waters. It was estimated that the temperature increase of the surrounding waters within a range of 100 metres (m) and 200 m from the seawater discharges of DCS would be up to 2°C and 1°C respectively. In response to Mr Albert CHAN's enquiry on the location of seawater discharge and pumping facilities, and with reference to Enclosure 1 to PWSC(2000-10)24, AD(EE),EMSD explained that a seawater discharge pipe was provided for the northern DCS plant and southern DCS plant respectively, while a seawater pump house was located at the southern DCS plant. As the seawater from DCS would be discharged towards the Victoria Harbour instead of the Kai Tak nullah adjacent to Kowloon Bay, the adverse effects on waters near the waterfront of Kowloon Bay would be minimal. At the request of Mr Albert CHAN, the Administration would provide, before the relevant FC meeting, more detailed layout plans to show the direction of water flow during pumping and discharge of seawater to and from the proposed DCS at KTD.

Admin

47. In reply to Mr Albert CHAN, AD(EE),EMSD confirmed that the operation of barges would not be affected during the construction stage of DCS.

Planting proposals

48. Mr IP Kwok-him noted that the proposed construction works would require tree removal, i.e. one tree would be felled and two trees would be replanted within the project site. As none of the trees were "important trees", he doubted whether it was necessary and cost-effective to replant these trees within the project site. He pointed out that removal and replanting would have adverse impact on the tree conditions. AD(EE),EMSD said that in view of the condition of the two trees and the time taken to grow new trees on the site, it was considered desirable to replant the two trees within the project site. The

Admin Chairman opined that the Administration should exercise flexibility in replanting proposals, and further discuss the issue at the meetings of the Panel on Home Affairs. Miss Tanya CHAN suggested that the Administration could replant these trees affected by the proposed works at suitable locations but minimize the frequency of tree removal. The Administration agreed to re-consider the replanting proposals in the light of members' suggestions.

49. The item was voted on and endorsed.

50. The meeting ended at 4:20 pm.

Council Business Division 1
Legislative Council Secretariat
4 June 2009