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

**Minutes of the 5th meeting
held in Conference Room 1 of the Legislative Council Complex
on Tuesday, 7 January 2014, at 8:30 am**

Members present:

Ir Dr Hon LO Wai-kwok, BBS, MH, JP (Chairman)
Hon LEUNG Che-cheung, BBS, MH, JP (Deputy Chairman)
Hon James TO Kun-sun
Hon CHAN Kam-lam, SBS, JP
Hon Emily LAU Wai-hing, JP
Hon TAM Yiu-chung, GBS, JP
Hon WONG Kwok-hing, BBS, MH
Hon IP Kwok-him, GBS, JP
Hon Alan LEONG Kah-kit, SC
Hon Michael TIEN Puk-sun, BBS, JP
Hon Frankie YICK Chi-ming
Hon MA Fung-kwok, SBS, JP
Hon Charles Peter MOK
Dr Hon Kenneth CHAN Ka-lok
Hon CHAN Yuen-han, SBS, JP
Hon Alice MAK Mei-kuen, JP
Dr Hon Fernando CHEUNG Chiu-hung
Dr Hon Helena WONG Pik-wan
Dr Hon Elizabeth QUAT, JP
Dr Hon CHIANG Lai-wan, JP
Hon Christopher CHUNG Shu-kun, BBS, MH, JP

Members absent:

Hon Abraham SHEK Lai-him, GBS, JP
Hon Cyd HO Sau-lan
Hon CHAN Hak-kan, JP
Dr Hon LEUNG Ka-lau

Hon Albert CHAN Wai-yip
Hon WU Chi-wai, MH
Hon Gary FAN Kwok-wai
Hon CHAN Han-pan
Hon Tony TSE Wai-chuen

Public officers attending:

Mr YEUNG Tak-keung	Deputy Secretary for Financial Services and the Treasury (Treasury)3
Mr CHAN Chi-ming	Deputy Secretary for Development (Works)2
Mr Thomas CHOW Tat-ming, JP	Permanent Secretary for Development (Planning and Lands)
Ms Anissa WONG, JP	Permanent Secretary for the Environment
Ms Jasmine CHOI Suet-yung	Principal Assistant Secretary for Financial Services and the Treasury (Treasury) (Works)
Mr YAU Shing-mu, JP	Under Secretary for Transport and Housing
Ms Judy CHUNG Sui-kei	Principal Assistant Secretary for Transport and Housing (Transport)5
Mr LAU Ka-keung, JP	Director of Highways
Mr Jimmy CHAN Pai-ming	Project Manager (Major Works) Highways Department
Mr Lawrence HO Kai-ming	Chief Engineer (3) (Major Works) Highways Department

Clerk in attendance:

Mr Derek LO	Chief Council Secretary (1)5
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Staff in attendance:

Mr Andy LAU	Assistant Secretary General 1
Ms Sharon CHUNG	Chief Council Secretary (1)6
Ms Connie HO	Senior Council Secretary (1)3
Mr Frankie WOO	Senior Legislative Assistant (1)3
Ms Christy YAU	Legislative Assistant (1)7

The Chairman advised that the meeting was to deal with one funding proposal of \$7,934.3 million carried over from the meeting of 3 January 2014. He said that if the proposal was approved, the cumulative number of projects approved by the Public Works Subcommittee (PWSC) in the 2013-2014 session would be three while the total amount of funding approved would be

\$33,222.3 million, of which \$29,471.4 million was related to capital works projects.

2. The Chairman reminded members that in accordance with Rule 83A of the Rules of Procedure (RoP) of the Legislative Council (LegCo), they should disclose the nature of any direct or indirect pecuniary interests relating to the funding proposals under discussion at the meeting before they spoke on the item. He also drew members' attention to Rule 84 of RoP on voting or withdrawal in case of direct pecuniary interest.

Head 706 – Highways

PWSC(2013-14)29 579TH Central – Wan Chai Bypass and Island Eastern Corridor Link

3. The Chairman advised that the proposal was to increase the approved project estimate (APE) for 579TH by \$7,934.3 million from \$28,104.6 million to \$36,038.9 million in money-of-the-day (MOD) prices to cover the additional costs arising from the higher-than-expected cost for the tunnel construction works and increase in the provision for price adjustment. The Panel on Transport had been consulted on the proposal on 15 November 2013 and Panel members supported the proposal. The gist of the Panel's discussion had been tabled at the meeting. Pursuant to Panel members' request, the Administration had provided supplementary information on the proposal on 17 December 2013.

Opening remarks by the Under Secretary for Transport and Housing

4. Under Secretary for Transport and Housing (USTH) informed members that the purpose of the funding proposal was to seek members' endorsement for an additional provision of \$7,934.3 million to cover the additional costs arising from the higher-than-expected cost for the tunnel construction works and an increase in the provision for price adjustment for the construction of the Central–Wan Chai Bypass and Island Eastern Corridor Link (the Trunk Road). The detailed explanations for the cost increase were provided in paragraphs 9 to 12 and paragraph 16 of the Administration's paper. He highlighted that over 80% of the proposed additional provision was to cater for the increase in price adjustment, as there had been a remarkable difference between the assumption on the trend rate of change in the prices for public sector building and construction output in March 2009, the basis on which the original estimate on price adjustment had been derived, and the latest assumption in September 2013 due to changes in the global economic environment and the rebound of the local economy after the global financial tsunami in 2008.

Estimation and control of project cost

5. Mr WONG Kwok-hing opined that the provision of the Trunk Road was vital to the relief of the traffic congestion problem along the north shore of Hong Kong Island. He urged the Administration to strive for the early completion of the project. However, in view of the cost overrun in a number of major infrastructure projects, Mr WONG cast doubt on the accuracy of the existing project cost estimation methodology and requested the Administration to review the related mechanism. Miss CHAN Yuen-han expressed a similar view, adding that the increase in labour and material costs should have been noticed at an earlier stage. Mr TAM Yiu-chung also urged the Administration to review the methodology for project cost estimation to improve its accuracy.

6. USTH said that the Administration agreed that the completion of the Trunk Road project was pivotal in relieving the traffic congestion problem on Hong Kong Island and would expedite the progress of the project to strive for its early completion. On estimation of project costs, USTH advised that of the 72 projects under Highways Department (HyD) launched in the past 10 years involving a total APE of \$320 billion, only 11 needed an increase in APE, amounting to \$20 billion in total, representing only about 6% of the original approved funding. He considered the current project cost estimation methodology effective for works projects. USTH stressed that the original project cost estimate of the Trunk Road project had been prepared in 2009, when Hong Kong was suffering from economic recession after the global financial tsunami. Various tender price indexes for the construction sector had dropped in 2009, with some seeing even double-digit year-on-year decreases. The prices of many construction materials had also been dragged down by the falling global commodity prices. In subsequent years, however, following the successive introduction and long-term implementation of super-loose monetary policies by major economies after the financial tsunami to sustain their aggregate demands, there had been rebounds in the global commodity prices in 2010 and 2011. Locally, the increase in the prices of construction materials was also notable. Meanwhile, with the increase of construction output in Hong Kong, the supply in the relevant labour markets had become tight and the wages had gone up. All of these factors had led to a significant deviation of the original project cost estimate in terms of price adjustment.

7. Ms Emily LAU opined that the Administration should inform LegCo of possible significant project cost overrun in good time, rather than requesting additional funds at a late stage, giving no choice for Members but to approve the increase. The Chairman also asked why the Administration had not requested additional funds for the project earlier in 2011 or 2012 upon knowing the upward trend in price adjustment.

8. USTH explained that the proposed increase in the provision for price adjustment was due to the difference between the Administration's assumption on trend rate of change in the prices for public sector building and construction output in March 2009, when Hong Kong was in an economic trough, and the latest assumption as at September 2013. The Administration considered it prudent to seek additional funds from the Finance Committee (FC) only upon conducting a thorough review on the expenditure of the project and confirming that the existing APE could not cope with the increase in the project cost. USTH agreed to Ms Emily LAU's view that LegCo should be informed of the proposed increase in APE for the Trunk Road project at an earlier stage. In fact, the Administration had already reported the cost overrun to the Panel on Transport in November last year. He assured members that the Administration would exercise stringent cost control over the project and any unspent sum in the revised APE would be returned to the Treasury. Deputy Secretary for Development (Works)2 (DS(W)2/DEVB) added that the Administration had been submitting quarterly reports to PWSC on major contracts awarded on capital works projects and significant deviations between accepted tender prices and the estimated provisions in APEs to enhance the transparency of the costs for such projects.

9. Pointing out that the United States national military and defense departments had adopted the Unified Facilities Criteria (UFC) to provide planning, design and construction criteria for their works projects, Dr Fernando CHEUNG enquired whether the Administration would consider drawing up a set of guidelines similar to UFC for better coordination of planning and cost estimation for public works projects across different government bureaux and departments.

10. DS(W)2/DEVB responded that the Administration had adopted the "estimating using risk analysis" approach in the preparation of project cost estimates. According to the result of a study commissioned by the Development Bureau (DEVB), the budgetary control of Hong Kong's capital works projects was good as compared with that of some other 30 overseas countries. While there was in general an average of more than 20% cost overrun in capital works projects in overseas countries, the rate for Hong Kong was -1%, and cost overrun had only occurred in individual projects. He added that in the past 10 LegCo sessions, FC had approved the funding of around 600 capital works projects, among which only 34 needed an increase in APE. The increased amount was \$21 billion, i.e. 3.4% of the total original APE of around \$620 billion. Meanwhile, there was cost reduction in many projects. At the request of the Chairman, the Administration would provide the results of the aforesaid study to the Subcommittee for reference after the completion of the study later this year.

11. Mr Christopher CHUNG said that it was unfortunate that the Trunk Road project had been substantially delayed due to the earlier judicial review on the decisions of the Town Planning Board regarding the draft Wan Chai North Outline Zoning Plan in connection with the project. Mr CHUNG said that the delay of the project had resulted in about 500 to 600 boats in the Causeway Bay Typhoon Shelter being affected by the proposed works for more than eight years, while the traffic congestion problem along the east-west Connaught Road Central/Harcourt Road/Gloucester Road Corridor on Hong Kong Island remained unresolved till now. Mr CHUNG and Dr CHIANG Lai-wan expressed grave concern over the severe cost overrun in a number of major public works projects and urged the Administration to step up the cost control.

Increase in labour cost

12. Pointing out that labour cost accounted for about 30% of the total costs of road works projects, Mr Michael TIEN estimated that about \$2,000 million out of the proposed increase of roughly \$7,000 million in the provision for price adjustment for the Trunk Road project was to cater for the increase in labour cost. He asked whether the Administration had conducted an assessment on the possible reduction in the project cost on the assumption that importation of workers would be allowed. Based on the view that the supply of local construction workers would remain tight and their wages might go up further in the future, Mr TIEN cast doubt on whether the Trunk Road project could be completed as scheduled within the revised APE. Mr Frankie YICK also expressed concern about whether the shortage of local construction workers would affect the commissioning of the Trunk Road.

13. USTH responded that the provision for price adjustment for a works project was basically an assessment at the macro level on the trend rate of change in the prices for public sector building and construction output, taking into account the global and local economic trends, the relevant construction works-related data, etc. It did not include a breakdown on the proportion of labour cost. However, a rough estimation based on the records and information of HyD indicated that the expenditure on the wages for construction workers generally accounted for about 30% of the contract expenses. Director of Highways (DHy) added that contractors had been encouraged to adopt wider use of mechanization and prefabricated components to minimize the demand for construction workers. In addition, contractors encountering difficulties in recruiting suitable workers locally could apply for importation of workers under the Supplementary Labour Scheme (SLS).

14. Dr Fernando CHEUNG opined that the upsurge in labour cost was due to the concentration of implementation of a large number of public works projects in recent years as well as the Administration's lack of advance

planning on the training of local construction workers. Miss CHAN Yuen-han and Miss Alice MAK expressed a similar view and opined that local construction workers should not be blamed for the escalation in project costs. Miss MAK said she did not see much improvement in the income of construction workers in recent years. She did not agree to Mr Michael TIEN's view that as labour cost accounted for roughly 30% of project cost, 30% of the increase in the APE of the Trunk Road project was therefore labour cost. She also did not subscribe to the view that importation of workers could help reduce the labour cost for works projects, as the wage level of imported workers was not to be lower than that of local workers.

15. DS(W)2/DEVB responded that the Administration had been closely monitoring the volume of construction works of capital works projects. He said that in the upcoming one to two years, the capital works expenditure of the Administration would be stably maintained at the level of about \$70 billion per year. To address the demand for construction manpower, the Administration had sought FC's approval in 2010 and 2012 for funding of a total of \$320 million to support the Construction Industry Council (CIC) to strengthen the recruitment and training for local construction personnel. The employment opportunities of local construction workers would not be affected by the volume of construction works of capital works projects in the next few years. But there might be a need to import skilled workers to alleviate manpower shortage in specific trades through SLS to spare part of the skilled workforce to train up new workers.

Provision for price adjustment

16. Mr IP Kwok-him opined that, to avoid further economic loss, the Trunk Road project, which had been dragged on for over 20 years due to contention on environmental issues, should not be further delayed. Concerned about the drastic increase in the project cost, he sought explanation on the significant deviation in the original project cost estimation in respect of price adjustment.

17. USTH responded that according to the existing Government practice, the monthly payments to contractors for most construction contracts were adjusted to cover market fluctuation in labour and material costs, and were known as Contract Price Fluctuation payments. Same as other capital works projects, provision for price adjustment had been earmarked for the Trunk Road project under the established mechanism. The price adjustment factor, updated on a half-yearly basis, was determined by Government economists based on the data on the annual and quarterly trend rate of change in the prices for public sector building and construction output, the latest movements in construction wages and building material prices, as well as the trends of the performance of the global and local economy. Since the original provision for price adjustment had been made for the Trunk Road

project in 2009, the year-on-year increase in the prices for public sector building and construction output had been higher than projected. Moreover, there was difference between the original and current cash flows of the project to take account of the actual tender schedules of various works contracts, works procedures adopted by the contractors, as well as the current works progress. The above two main reasons had led to an increase of \$6,959 million in the provision for price adjustment.

18. DS(W)2/DEVB added that the component of "price adjustment" also served to enhance the transparency of project cost estimation. Given the lengthy construction period and the substantial cost of the Trunk Road project and that the original cost estimate of the project had been prepared during the economic trough in 2009, the increase in the provision for price adjustment of the project was mainly due to changes in the external economic situation but not miscalculation.

19. Dr CHIANG Lai-wan said that for the proposed increase of \$6,959 million in the provision for price adjustment, the Administration should provide a detailed breakdown. Mr IP Kwok-him held the view that the provision of Contract Price Fluctuation payments in the works contracts might provide room for contractors to profiteer. Considering that the risks in respect of increase in project costs should not be shouldered entirely by the Administration, he urged the Administration to review the terms and conditions of works contracts. Pointing out that the Trunk Road project was targeted for completion by 2017, Mr IP enquired about the relevancy of the latest assumption (as at September 2013) on the increase in prices for public sector building and construction output of 5% per annum from 2018 to 2023 (in paragraph 11 of the Administration's paper) to the project. DS(W)2/DEVB advised that as some payments for the project would be made beyond 2017, it was necessary to have those figures for projection purposes.

20. Mr Frankie YICK and Mr CHAN Kam-lam enquired whether the revised APE would be the ceiling amount and no more additional provisions would be sought for the project in the future. Mr CHAN urged the Administration to exercise stringent control over contract prices as a substantial portion of the proposed increase in APE was to cater for price adjustment. In response, USTH said that the Administration was confident that the revised project estimate, already taking into account the latest assumption on the trend rate of change in the prices of public sector building and construction output together with the cash flow of the project, would be sufficient to cover the cost of the whole project until its completion; provided that there would be no significant changes in the external economic environment.

Overall planning and budgetary control for projects under the Public Works Programme

21. Mr MA Fung-kwok said that there had been many cases of cost overrun in public works projects in the first few years after 1997. At that time, he had suggested that the Administration should properly phase out the tendering exercises and commencement of major works projects to minimize the impact of the implementation of such projects on the demand for resources in the construction industry. He said that following the implementation of the projects, the Administration should monitor the aforesaid impact on a regular basis. He queried whether the increases in project costs were caused by the upsurge in construction costs or the profit returns for works contractors.

22. DS(W)2/DEVB responded that the Administration had adopted a multi-pronged approach in the monitoring of capital works projects under the Public Works Programme (PWP). Dedicated committees had been set up in works departments to review project cost estimates, and to monitor the expenditures on, and the progress of capital works projects. The Administration had also collaborated with CIC, through its website, to publish the expenditure forecast on public and private construction works for the next few years for the reference of industry stakeholders to facilitate their long-term planning on the manpower resources to be deployed and the materials to be ordered. According to the latest forecast, the overall annual construction expenditure over the next few years would reach the level of \$170 billion, of which about \$70 billion was the Administration's expenditure on capital works projects. The Administration had no information on the net profits of contractors.

23. In the light of huge cost overrun in a number of public works projects recently discussed by PWSC and the Panels, Mr Alan LEONG was of the view that the Administration was unable to control the budget for PWP and so it could only respond passively to the escalation in project costs by seeking LegCo's approval for increases in APE. Dr Kenneth CHAN said that the Administration should admit its mistakes in the planning of public works projects in recent years, which had led to the quick escalation of project costs. Mr LEONG asked which Government bureau/department was responsible for overseeing the planning of PWP and supply of the necessary resources in the concerned industries. DS(W)2/DEVB said that while DEVB was responsible for monitoring the implementation of PWP and collaboration with CIC on the training of construction workers, it would need to rely on Government economists for providing analyses on the impact of external economic factors on the construction sector.

24. Mr IP Kwok-him opined that the over-concentration of construction of major works projects in recent years might have pushed up the prices of labour, construction materials and machinery, thereby leading to the upsurge in project costs. He advised the Administration to review the priorities of projects under PWP. Mr TAM Yiu-chung requested the Administration to learn from the experience of project cost overrun and conduct a thorough review on the overall planning, management and budgetary control of works projects under PWP. Dr Fernando CHEUNG also urged the Administration to conduct such a review.

25. Miss CHAN Yuen-han said that the Administration should enhance the coordination among various bureaux and departments on the implementation of major works projects in the future as well as the supply of manpower in the construction industry. At Miss CHAN's request and with the concurrence of members, the Chairman would request the Chairman of the House Committee (H/HC) to convey members' concerns on these issues to the Chief Secretary for Administration for her attention and necessary action.

(Post-meeting note: The Chairman conveyed the Subcommittee's request to the H/HC at the meeting of HC held on 10 January 2014.)

26. Ms Emily LAU suggested that a meeting of the Subcommittee be convened to discuss with the Administration the planning and budgetary control of projects under PWP. The Chairman advised that while PWSC was tasked to scrutinize the funding proposals of public works projects, the wider policy issue on overall planning and control of PWP was under the purview of the DEVB and the issue would be referred to the Panel on Development for deliberation. Members agreed to the Chairman's proposal.

(Post-meeting note: At the instruction of the Chairman, on 10 January 2014, the Clerk referred the issue to the Panel on Development for deliberation.)

Site investigation for tunnel construction works

27. The Subcommittee noted that the increase in the cost of diaphragm walls and barrette piles in the tunnel construction works at \$975.3 million was partly due to the fact that the actual depths of such walls and piles was greater than what were estimated during the design stage. Miss Alice MAK asked about the permitted margin of error according to the international standard in respect of investigation works for tunnel construction. Dr Kenneth CHAN enquired about the Administration's internal guideline for the permitted margin of error and which party should be accountable for significant errors.

28. DHy explained that the site investigation for the tunnel construction works of the project had been carried out in accordance with general design practice, which was basically a sampling technique and would be subject to statistical errors. However, as the route of part of the main tunnel and its slip roads lay across busy roads, navigation channels, piers, typhoon shelters, etc., these had restricted the extent of any additional site investigation works that could be conducted at the design stage. As revealed from the actual ground conditions encountered during the construction stage of diaphragm walls and barrette piles, the bedrock profiles varied significantly at some locations as compared with those envisaged during the design stage. The bedrock levels were deeper-than-expected, especially for the tunnel section in the Causeway Bay Typhoon Shelter, resulting in deeper diaphragm walls and barrette piles required. DHy said that ground investigation for civil engineering projects involving works underground or undersea were subject to higher risks of sampling error, as in-between geological variations of boreholes could be large. HyD's consultant had already made reference to 280 boreholes to collect geological information along the alignment of the tunnel, which was less than 4 km. He added that the cost increase due to the deeper-than-expected bedrock levels for founding the diaphragm walls and barrette piles was about \$300 million, representing only 5% to 6% of the original estimates of \$5,643.2 million for this works item. He said that the performance of the construction sector of Hong Kong in site investigation works was in general comparable to that of other countries.

29. Dr Kenneth CHAN and Mr MA Fung-kwok were not satisfied with the Administration's explanation. They opined that, given the design of the route of the tunnel, the Administration should have taken into account the higher risks of sampling error and conducted more in-depth investigation works at the design stage, rather than taking remedial measures, the cost of which had escalated, at a late stage.

Other issues

30. Mr WONG Kwok-hing enquired if the Trunk Road project would have any adverse impact on the archaeological deposit at the Kellett Island Archaeological Site which partly fell within the project boundary. DHy responded that the alignment of the Trunk Road would run underneath the approach of the Cross Harbour Tunnel to avoid encroaching on Kellett Island and affecting any archaeological deposits.

31. Dr CHIANG Lai-wan sought explanation for the increase of \$310.1 million, which was about 50% of the original estimate, in the provision for the building and ventilation structures of the project. DHy responded that the increase was due to the additional installation in the air purification system to remove nitrogen dioxide from the tunnel exhaust in

response to public views for better quality of exhaust air from tunnels.

32. Ms Emily LAU enquired about the reasons for the decrease of \$84.7 million in the costs for the roads and drains, elevated structures and foundations, retaining walls and slope works, noise mitigation facilities, reprovisioning of affected facilities, landscaping works, and installation of a traffic control and surveillance system, as mentioned in paragraph 13(d) of the paper, while other costs were on the rise. DHy responded that the variation was due to the slight differences between the prices in the awarded tenders and the sums allowed in APE for those items. The differences were due to the Administration's adoption of various measures to enhance the competitiveness of the tenderers' bids. Meanwhile, the costs of some items had also been reduced due to technological advancement. The Administration would take into account the relevant price trends in future estimation of project costs. In response to Ms Emily LAU's query on whether works contracts would be awarded to the tenderers offering the lowest bids, DHy clarified that the Administration would take into account the past performance of the contractors as well as their tender prices in tender assessment. In other words, the tenderers submitting the lowest bids would not necessarily be awarded the contracts.

33. Mr Frankie YICK opined that the Trunk Road project should not be further delayed in view of the huge social cost to be incurred. He sought further information on the progress of the works to be implemented under the contracts already awarded as listed in Enclosure 2 to the paper.

34. DHy said that the Trunk Road project was implemented under 13 works contracts, of which 12 had been awarded. As regards the tunnel construction, some 40% of the tunnel structure in the permanent reclamation formed under the Wan Chai Development Phase II had been completed and about 35% of the tunnel structure employing temporary reclamation method at the Causeway Bay Typhoon Shelter and the ex-Public Cargo Working Area had also been built. On the whole, the construction works were progressing satisfactorily. Subject to FC's approval of the present funding proposal, the Administration would award the last works contract for the project as soon as possible, with a view to commissioning the Trunk Road in 2017.

35. The item was voted on and endorsed.

36. The Chairman consulted members on whether the item would require separate discussion and voting at the relevant FC meeting. Members did not raise any specific request.

Any other business

37. There being no other business, the meeting ended at 10:26 am.

Council Business Division 1
Legislative Council Secretariat
23 January 2014