

**立法會**  
***Legislative Council***

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(These minutes have been  
seen by the Administration)

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**Finance Committee of the Legislative Council**

**Minutes of the 1<sup>st</sup> meeting**  
**held at Conference Room 1 of the Legislative Council Complex**  
**on Friday, 25 October 2019, from 4:01 pm to 6:57 pm**

**Members present:**

Hon CHAN Kin-por, GBS, JP (Chairman)  
Hon CHAN Chun-ying, JP (Deputy Chairman)  
Hon James TO Kun-sun  
Hon LEUNG Yiu-chung  
Hon Abraham SHEK Lai-him, GBS, JP  
Hon Tommy CHEUNG Yu-yan, GBS, JP  
Prof Hon Joseph LEE Kok-long, SBS, JP  
Hon Jeffrey LAM Kin-fung, GBS, JP  
Hon WONG Ting-kwong, GBS, JP  
Hon Starry LEE Wai-king, SBS, JP  
Hon CHAN Hak-kan, BBS, JP  
Dr Hon Priscilla LEUNG Mei-fun, SBS, JP  
Hon WONG Kwok-kin, SBS, JP  
Hon Mrs Regina IP LAU Suk-yee, GBS, JP  
Hon Paul TSE Wai-chun, JP  
Hon Claudia MO  
Hon Michael TIEN Puk-sun, BBS, JP  
Hon Steven HO Chun-yin, BBS  
Hon Frankie YICK Chi-ming, SBS, JP  
Hon WU Chi-wai, MH  
Hon YIU Si-wing, BBS  
Hon MA Fung-kwok, SBS, JP  
Hon Charles Peter MOK, JP  
Hon CHAN Chi-chuen

Hon CHAN Han-pan, BBS, JP  
Hon LEUNG Che-cheung, SBS, MH, JP  
Hon Kenneth LEUNG  
Hon Alice MAK Mei-kuen, BBS, JP  
Dr Hon KWOK Ka-ki  
Hon KWOK Wai-keung, JP  
Hon Dennis KWOK Wing-hang  
Hon Christopher CHEUNG Wah-fung, SBS, JP  
Dr Hon Helena WONG Pik-wan  
Hon IP Kin-yuen  
Hon Elizabeth QUAT, BBS, JP  
Hon Martin LIAO Cheung-kong, GBS, JP  
Hon POON Siu-ping, BBS, MH  
Dr Hon CHIANG Lai-wan, SBS, JP  
Ir Dr Hon LO Wai-kiwok, SBS, MH, JP  
Hon CHUNG Kwok-pan  
Hon Alvin YEUNG  
Hon Andrew WAN Siu-kin  
Hon CHU Hoi-dick  
Hon Jimmy NG Wing-ka, BBS, JP  
Dr Hon Junius HO Kwan-yiu, JP  
Hon HO Kai-ming  
Hon LAM Cheuk-ting  
Hon Holden CHOW Ho-ding  
Hon SHIU Ka-fai, JP  
Hon SHIU Ka-chun  
Hon Wilson OR Chong-shing, MH  
Hon YUNG Hoi-yan, JP  
Dr Hon Pierre CHAN  
Hon Tanya CHAN  
Hon HUI Chi-fung  
Hon LUK Chung-hung, JP  
Hon LAU Kwok-fan, MH  
Hon Kenneth LAU Ip-keung, BBS, MH, JP  
Dr Hon CHENG Chung-tai  
Hon Jeremy TAM Man-ho  
Hon Gary FAN Kwok-wai  
Hon AU Nok-hin  
Hon Vincent CHENG Wing-shun, MH, JP  
Hon Tony TSE Wai-chuen, BBS  
Hon CHAN Hoi-yan

**Members absent:**

Dr Hon Fernando CHEUNG Chiu-hung  
Hon CHEUNG Kwok-kwan, JP  
Hon KWONG Chun-yu

**Public officers attending:**

Ms Alice LAU Yim, JP	Permanent Secretary for Financial Services and the Treasury (Treasury)
Mr Raistlin LAU Chun, JP	Deputy Secretary for Financial Services and the Treasury (Treasury) 1
Mr Mike CHENG Wai-man	Principal Executive Officer (General), Financial Services and the Treasury Bureau (The Treasury Branch)
Mrs Sharon YIP LEE Hang-ye, JP	Deputy Secretary for Transport and Housing (Transport)1
Mr Raymond SY Kim-cheung	Principal Assistant Secretary for Transport and Housing (Transport)5
Mr Michael LEUNG Chung-lap, JP	Project Manager (East), Civil Engineering and Development Department
Mr Sunny LO Sai-pak	Chief Engineer (East 1), Civil Engineering and Development Department
Mr KAN Hon-shing	Chief Engineer (East 3), Civil Engineering and Development Department
Mr Tommy WONG Chi-wai	Senior Engineer (East 15), Civil Engineering and Development Department
Mr Harry MA Hon-ngai	Acting Assistant Commissioner for Transport (Planning)
Mr Kelvin SIU Kin-man	Chief Engineer (Major Projects), Transport Department
Mr Vincent MAK Shing-cheung, JP	Deputy Secretary for Development (Works)2
Mr WONG Chung-leung, JP	Director of Water Supplies

Mr PANG Wai-shing	Assistant Director of Water Supplies (New Works)
Mr LAM Shing-tim	Chief Engineer (Consultants Management), Water Supplies Department

**Clerk in attendance:**

Ms Anita SIT	Assistant Secretary General 1
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**Staff in attendance:**

Miss Bowie LAM	Council Secretary (1)1
Miss Queenie LAM	Senior Legislative Assistant (1)2
Mr Frankie WOO	Senior Legislative Assistant (1)3
Miss Yannes HO	Legislative Assistant (1)7

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Action

The Chairman reminded members of the requirements under Rule 83A and Rule 84 of the Rules of Procedure.

2. The Chairman declared that he was an executive director and chief executive officer of Well Link Insurance Group Holdings Limited.

**Item 1 — FCR(2019-20)14**

**RECOMMENDATION OF THE PUBLIC WORKS  
SUBCOMMITTEE MADE ON 26 APRIL 2019**

**PWSC(2018-19)45**

**HEAD 707**

**— NEW TOWNS AND URBAN AREA  
DEVELOPMENT**

**Transport**

**— Roads**

**785TH**

**— Trunk Road T2 and Cha Kwo Ling  
Tunnel - Construction**

3. The Chairman advised that this item sought the approval of the Finance Committee ("FC") for the recommendation of the Public Works Subcommittee ("PWSC") made at its meeting on 26 April 2019, i.e. the

recommendation in PWSC(2018-19)45 to recommend to FC the upgrading of 785TH to Category A at an estimated cost of \$16,017 million in money-of-the-day ("MOD") prices for the construction of the Trunk Road T2 and Cha Kwo Ling ("CKL") Tunnel connecting with the Central Kowloon Route ("CKR") and Tseung Kwan O-Lam Tin Tunnel ("TKO-LTT"). The item had been discussed by PWSC for 29 minutes, and by FC at its meeting on 28 June 2019 for 26 minutes.

#### Project cost

##### *Cost estimate*

4. Mr Christopher CHEUNG spoke in support of the project as it would ease traffic between West Kowloon and TKO considerably. He was, however, concerned with the high project cost and enquired:

- (a) if the Administration was confident that there would be no cost overrun and delay in project works; and
- (b) how the Administration would discharge its monitoring role to ensure the project's compliance with the required standards.

5. Deputy Secretary for Transport and Housing (Transport)1 ("DS for TH(T)1") said that the Trunk Road T2 and CKL Tunnel project was a mega-sized project under planning for a long period of time. It was originally scheduled for completion in 2025, but deferral of consideration of the funding application for a few months' time had necessitated adjustment of the target completion time to 2026. She affirmed that the Administration was confident of completing the project on schedule and within budget.

6. Project Manager (East), Civil Engineering and Development Department ("PM(E), CEDD") added that the Administration would make use of an electronic site management system to enhance monitoring of the Trunk Road T2 and CKL Tunnel project. Chief Engineer (East 3), CEDD ("CE(E3)") elaborated that a range of measures would be adopted for enhancing project management, including digitization and informatization of project information to facilitate real time updating and access. These measures would reduce the need for manual handling, enhance work flow and document management as well as communication, thus enhancing project management.

7. Dr KWOK Ka-ki cited previous examples of cost overrun of public works projects and sought assurance on whether the project estimate for Trunk Road T2 and CKL Tunnel project was realistic. He also asked if the contracts might be awarded to consultancy firms with problematic track records.

8. DS for TH(T)1 advised that the project cost was estimated having regard to those of previous projects. She emphasized that the project was of a mega scale encompassing a wide range of works including the construction of tunnels, ventilation buildings, and a traffic control and surveillance system. In addition, substantial parts of the works would be undertaken underground with a high degree of complexity, and due regard would also have to be given to minimizing the environmental impacts on the CKL Village. She affirmed that the project estimate had reflected these various factors.

9. Mr Holden CHOW also expressed concern about the high project cost, and enquired about recent examples of overseas projects of a similar scale. He made reference to the Sydney Harbour Bridge project, which was of a similar length of 3 km and built over 20 years ago at a cost of A\$550 million. Mr CHOW remarked that international standards should be made available for reference.

10. On the project cost, PM(E), CEDD pointed out that the Trunk Road T2 and CKL Tunnel project constituted part of Route 6 and would be connected to TKO-LTT. The construction cost per km for Trunk Road T2 was \$4,900 million, and that for TKO-LTT was \$4,300 million. The relatively high cost was attributed to two factors. Firstly, the bulk of the Trunk Road T2 and CKL Tunnel project involved works undertaken in the Victoria Harbour, and its compliance with requirements under the Protection of the Harbour Ordinance (Cap. 531) would incur higher costs. Secondly, special arrangements for the works at the Kai Tak South Apron would have to be made so as to avoid affecting the operation of the Hong Kong Children Hospital and the New Acute Hospital ("NAH") under construction.

11. As regards comparison with overseas projects, PM(E), CEDD stressed that the project in question involved works to be undertaken at 40 m underwater. In recognition of the complexity of the project, the Administration had invited tenders globally to facilitate participation by contractors with the requisite expertise, equipment and materials. In addition, a design-and-build contract arrangement was adopted to maximize the application of available expertise. DS for TH(T)1 added

that it was difficult for comparison to be made with projects overseas on account of the differences in respect of the site conditions in Hong Kong, the depth of the tunnels involved, as well as the safety measures and works to be undertaken.

12. Ms Claudia MO remarked that the Central-Wan Chai Bypass ("CWB") was even more costly by comparison. With a length of 4.5 km and a project cost of \$36,000 million, the cost of CWB was \$8,000 million per km. She asked if it would be possible for any cost overrun of the Trunk Road T2 and CKL Tunnel project to be contained within 10%.

13. In response, DS for TH(T)1 said that the estimated project cost was a reasonable one made on consideration of relevant factors and the costs for previous projects. Moreover, provision for contingencies had been incorporated in the overall project estimate and the Administration was confident of completing the project within budget.

14. Dr LO Wai-kwok said that members belonging to the Business and Professionals Alliance for Hong Kong were supportive of the project, which was a strategic one connecting various road networks in TKO and Kowloon. He recalled that when the item was discussed by PWSC in April 2019, members were generally supportive of the project. Dr LO appreciated the difficulties faced by the engineering team in designing the road alignment amidst the heavily built-up areas in Hong Kong and in coming up with a viable option. He also cited the Administration's latest advice that it would no longer be necessary to undertake the remaining works for TKO-LTT on account of the announcement in the 2019 Policy Address to waive its tolls. Dr LO urged the Administration to ensure that the commissioning of the various sections of Route 6 would be well coordinated.

15. DS for TH(T)1 reiterated that the original target was to complete the project in tandem with CKR in order that the entire Route 6 could be open to traffic in 2025. As funding approval could not be obtained in June 2019, the Administration had reviewed the situation and adjusted the target completion time of the Trunk Road T2 and CKL Tunnel project and Route 6 to 2026.

#### *Cost estimate for contingencies*

16. Speaking in support of the project which would ease traffic congestion in East Kowloon, in particular in TKO and Kwun Tong, Mr Wilson OR sought elaboration on the estimate of \$1,450 million for

contingencies, including whether it might have been inflated to cater for possible cost overrun.

17. DS for TH(T)1 and PM(E), CEDD explained that the provision for contingencies, which was about 10% of the total project estimate, was necessary to cope with unexpected situations. One example was the need to reserve funds to address the possible issue of uncharted utilities; another example was the possible delay in works on account of extreme weather conditions.

18. Deputy Secretary for Financial Services and the Treasury (Treasury)1 ("DS(Tsy)1") said that in general, a provision of about 10% of the total project estimate was usually set aside in each works project for contingencies. As the provision was for contingency purposes, details of the breakdown were normally not available.

*Scope for cost reduction*

19. Mr CHAN Chi-chuen referred to the recent stormy situation in Hong Kong, and asked if the Administration had re-assessed the current economic situation and its impact on the costs of works projects overall.

20. DS(Tsy)1 explained that an established mechanism was in place for updating the project cost estimates of works projects. If a tender had already been invited, the Administration would update the project cost estimate based on the price of the selected tender before submitting the funding application to FC. If a tender had not yet been invited, the Administration would take into account the latest price adjustment factors available to update the project cost estimate in the MOD prices before submitting the funding application to FC.

21. Mr Martin LIAO enquired if there was scope for cost reduction for the Trunk Road T2 and CKL Tunnel project. He said that the tender prices for the redevelopment and expansion of certain hospitals were lower than originally estimated, as shown in the Administration's funding application under another agenda item. As CEDD had commenced parallel tendering for the pre-qualification of the main contract of the Trunk Road T2 and CKL Tunnel project in August 2018 and invited the pre-qualified tenderers to tender in January 2019, and the funding proposal had been deferred for consideration from June 2019 to October 2019, Mr LIAO asked whether these developments had led to a reduction in the tender prices in the same manner as those for the said hospital works programmes.



22. PM(E), CEDD reiterated that the Administration had launched a global tender exercise in view of the specific technical expertise involved and was still assessing the tenders received. The Administration considered the project cost of \$16,017 million a reasonable estimate.

23. Mr WU Chi-wai enquired about the possibility of calling back the tenders for the project which were invited in January 2019 when prices were relatively high, as there might have been a reduction in the Building Works Tender Price Index in the interim period.

24. In response, DS(Tsy)1 advised that the project cost estimate in the funding application was derived having regard to the latest price adjustment factors available. In the event that the price adjustment factors had been updated when the project was waiting for its turn to be considered by FC, the Administration would update the project cost estimate in the FC submission as appropriate. As the price adjustment factors were compiled on a half-yearly basis, the need for updating the project cost estimate in the funding submission to FC was rare. However, he recalled that there was one occasion when the project cost estimate in the funding submission to FC had to be updated because of the long lead time between its endorsement by PWSC and eventual consideration by FC.

#### *Cash flow*

25. Mr AU Nok-hin enquired about the cash flow for the project, which showed that about 25% of the project cost would be paid in the years between 2026 and 2029, i.e. after the commissioning of the Trunk Road T2 and CKL Tunnel project in 2026.

26. In reply, PM(E), CEDD said that notwithstanding the scheduled commissioning of Trunk Road T2 and CKL Tunnel in 2026, it would still be necessary for the Administration to ascertain whether the performance of the contractors was up to standard before making final payment. This explained why expenses would still be incurred a few years after 2026.

#### *Related concerns*

27. Mr LEUNG Yiu-chung expressed worries that the selection of low tender bids might result in problems such as the non-completion of projects, default in the payment of salaries and other labour disputes, which would be particularly complex if subcontracting was involved. He enquired about the preventive measures to be taken by the Administration in this regard.

28. PM(E), CEDD pointed out that a requirement for the appointment of Labour Relations Officers would be stipulated in the contracts. These officers would provide assistance to contractors' employees on labour-related issues including the payment of salaries. If subcontracting of works was involved, the main contractor would bear ultimate responsibility. On the concern regarding the quality of works, PM(E), CEDD said that mobile applications would be developed to expedite the resolution of risk issues and to strengthen site supervision in particular regard to works quality.

29. Mr CHAN Chun-ying indicated support for the Trunk Road T2 and CKL Tunnel project. He enquired whether the consultants' fees for contract administration for each works project were calculated on a stand-alone basis, unlike the costs for resident site staff which showed the estimated man-months and were pegged to that of the Master Pay Scale of the HKSAR Government. PM(E), CEDD advised that consultants' fees for contract management were estimated on the basis of the scale of contracts. In this regard, the consultants would be responsible for contract administration in their head offices.

30. Mr CHAN Chun-ying further enquired about the location of the 393.9 m<sup>2</sup> of private land involved as stated in paragraph 28 of the PWSC paper under consideration, and the reason for not budgeting for the creation of the easements concerned and other permanent rights. PM(E), CEDD said that the 393.9 m<sup>2</sup> private land was about 10 m to 40 m beneath the ground surface of the CKL Village. The related expenses would be chargeable to resources of the Lands Department.

### Ventilation system and other technical concerns

#### *Ventilation system*

31. Mr Gary FAN noted that about \$700 million was estimated for the construction of two ventilation buildings, and about \$250 million for an air purification system. He expressed concern on their high costs and effectiveness in improving air quality. Mr FAN cited the incident at CWB the air purification system for which malfunctioned shortly after commencement of operation in February 2019 and only resumed operation in May 2019; and the Administration subsequently announced that the air quality in CWB was not abnormal during this period. Mr FAN requested justifications for the two ventilation buildings and the air purification system at the Trunk Road T2 project, including whether the cost could be reduced. He also sought explanation why the malfunctioning of the air purification system in CWB had not affected air quality.

32. In response, PM(E), CEDD explained that the air purification system in the ventilation building at the western entrance/exit of the Trunk Road T2 and CKL Tunnel in Kai Tak would reduce target air pollutants by about 80%. Its estimated cost had made reference to those of similar systems, and the current figure was a reasonable estimate. As regards the incident at CWB, Principal Assistant Secretary for Transport and Housing (Transport)5 ("PAS for TH(T)5") explained that some but not all of the fan components at the ventilation system in the East Ventilation Building of CWB were damaged. This occurred during the early stage of commissioning of CWB when traffic flow was not heavy, and the air quality monitoring results showed no abnormalities within the tunnel and in the vicinity of the eastern portal.

33. Mr CHAN Chi-chuen followed up on the incident at CWB and enquired: (a) about the cause for the defect and the reason why it was detected only at a late stage; (b) if the technicality of the two ventilation buildings at Trunk Road T2 and CKL Tunnel would be similar to that of CWB; and (c) whether the Administration could refrain from awarding future contracts to the contractors of CWB in view of their serious mistakes.

34. On the CWB ventilation incident, DS for TH(T)1 said that the Administration had studied the causes leading to the incident, and had taken this into account in the design of the ventilation system at Trunk Road T2 to avoid recurrence. PM(E), CEDD supplemented that the ventilation systems of the two said projects were technically similar, but that for Trunk Road T2 would be further enhanced by providing extra spare parts.

35. Mr Jeremy TAM shared similar concerns regarding the ventilation system and enquired:

- (a) whether the effectiveness of the ventilation system in CWB matched the expected standard; and
- (b) whether facilities in the two ventilation buildings for the Trunk Road T2 and CKL Tunnel project would be similar to those of CWB with filtering and environmental protection features which would reduce exhaust air significantly.

36. On (a) above, PAS for TH(T)5 said that the effectiveness of the ventilation system in CWB had reached the anticipated standard and was being monitored by the Highways Department. As regards (b) above,

PM(E), CEDD said that the ventilation building in Kai Tak would have an air purification system on account of its close proximity with NAH, and the technology would be similar to that at CWB. The need for such a system at the ventilation building in Lam Tin did not arise as its vents were far away from residential buildings, and the terrain surrounding the ventilation building also made it unnecessary for the installation of such a system.

37. Mr Alvin YEUNG enquired about the cost for the air purification system, and the technical feasibility for its addition in the ventilation building in Lam Tin. PM(E), CEDD said that the air purification system in Kai Tak would cost about \$250 million, and the cost for another one in Lam Tin would be in similar order. He reiterated that the need for such a system in Lam Tin did not arise having regard to the surrounding environment.

38. Mr Alvin YEUNG pointed out that there might be changes in future developments such as the addition of residential and commercial units drawing more residents and commuters to the area in Lam Tin. He requested response on the technical feasibility of the addition of the system in Lam Tin at a later stage. PM(E), CEDD confirmed that the technical feasibility for addition of such a system would be considered at the detailed design stage of the design-and-build contract.

39. Mr Jeremy TAM also did not accept the response of the Administration regarding the non-provision of the air purification system in Lam Tin. He made reference to the PWSC paper under consideration, which stated that objections against the TKO-LTT project had been raised concerning the air quality impact on the Yau Lai Estate, and enquired about the distance between the ventilation building and the estate.

40. PM(E), CEDD said that the distance was about 400 m. At Mr Jeremy TAM's request, PM(E), CEDD undertook to consider reserving space for the addition of an air purification system in Lam Tin at the detailed design stage.

41. Mr Jeremy TAM enquired how residents could get to the landscape deck at the Lam Tin Interchange at TKO-LTT, and what facilities would be provided therein. Chief Engineer (East 1), CEDD said that the deck would basically be a cover for noise abatement purpose and would not incorporate facilities for other purposes. Nevertheless, CEDD was consulting relevant government departments on the feasibility of opening up part of the deck to the public, who would be able to gain access to the deck via a pedestrian footbridge near the entrance/exit of the Eastern

Harbour Crossing. He added that the loading concern would need to be addressed.

*Other technical concerns*

42. Mr Kenneth LEUNG reckoned that the Administration's decision for the construction of the Trunk Road T2 project with the proposed alignment and such a high degree of complexity would inevitably incur high costs. He expressed concern on the site investigation work undertaken so far by the Administration, as experience with tunnel projects had shown that excavation works undertaken at subsequent stages might reveal rock layers which were more complex and problematic thus incurring additional costs.

43. On Mr LEUNG's concern about the alignment of the project, DS for TH(T)1 said that it had been proposed as a result of studies undertaken for many years. The findings were that underwater works was the only viable option because the existing road network in Kwun Tong did not make it possible for the addition of more roads. The Administration had resorted to the existing proposal notwithstanding the difficulties involved, in a bid to improve traffic flow in the district. As regards the geological situation, DS for TH(T)1 acknowledged that it was highly complex and hence relatively more site investigation works had been conducted in comparison with other road projects.

44. Mr HO Kai-ming indicated support for the project which would alleviate traffic congestion in the same manner as CWB. He recalled another option of cut and cover method when the project was first discussed in 2005, and sought explanation on the reason for the Administration to resort to the current option which entailed significant costs. Mr AU Nok-hin also expressed concern on whether the cut and cover option could better ensure that historic buildings such as the CKL Tin Hau Temple and Law Mansion would not be affected.

45. PM(E), CEDD explained that the immersed tube option similar to that of the Cross-Harbour Tunnel considered at an early stage had its limitations. As the 2 km underwater tunnel would span from the Kai Tak South Apron to the CKL Village traversing the Kwun Tong Typhoon Shelter, this option would necessitate temporary reclamation in the harbour and adversely affect the operation of the typhoon shelter. Furthermore, the cut and cover tunnel option would necessitate open excavation from the ground surface. Conversely, for the option currently proposed, a tunnel would be bored at around 20 m below the ground surface of the CKL Village and this would cause the least disruption to residents therein. He

added that the tunnel alignment would be 50 m away from the Law Mansion and 170 m from the Tin Hau Temple.

46. Mr WU Chi-wai sought clarification on the positioning of the tunnels. PM(E), CEDD advised that the underwater tunnel would be about 2 km, while underground tunnels would be located both in CKL and Kai Tak with a total length of about 1 km.

47. Mr WU Chi-wai expressed worries about the existence of heavy metal materials in the seabed in Kowloon Bay. He enquired if the underwater tunnel would affect such materials and if so, the solutions available. In response, PM(E), CEDD said that works for the underwater tunnel would be undertaken at 40 m below sea level, i.e. lower than the seabed. As such, there would not be any impact on the water body.

48. Mr YIU Si-wing expressed concern on the security arrangements and facilities of the Trunk Road T2 and CKL Tunnel in the light of recent vandalism in the Cross-Harbour Tunnel and public facilities in Hong Kong. He said that incidents such as fire outbreak, traffic accidents and man-made damages might affect the operation of the Trunk Road T2 and CKL Tunnel, and enquired if there would be new and enhanced facilities in the surveillance system, management offices and police stations for showing situations inside the tunnel and at the entrances/exits to facilitate timely rescue actions.

49. DS for TH(T)1 said that basic facilities were in place to deal with the aforementioned situations, and management companies were appointed for the management of each and every tunnel in Hong Kong. In addition, the Transport Department ("TD") would monitor traffic situations on a territory-wide basis. PM(E), CEDD supplemented that a traffic control and surveillance system was incorporated for monitoring traffic situations and conveying timely information to TD. This apart, a cross passage arrangement for every 100 m inside the tunnel would facilitate evacuation, say, in the event of fire outbreak.

50. Mr YIU Si-wing stressed the need for the Administration to specify in the relevant management contract the basic security standards for compliance by management companies. DS for TH(T)1 took note of Mr YIU's suggestion.

#### Impact on traffic

51. Mr Kenneth LEUNG cast doubt on the effectiveness of the Trunk Road T2 project in easing traffic congestion in TKO. He expressed

worries that the traffic assessment by the Administration might not catch up with the increase in traffic flow of the district. On the other hand, Mr Martin LIAO enquired when works originally scheduled for the latter half of 2019 would commence, and whether such works would tie in with the opening of CKR to avoid serious traffic jam in Kowloon Bay during peak hours.

52. On the planned works schedule, DS for TH(T)1 said that CKR would be open for traffic in 2025, and TKO-LTT in 2021. While deferral of the Trunk Road T2 and CKL Tunnel project funding approval would defer its commissioning from 2025 to 2026, the Administration hoped to expedite works connecting to CKR and enable the entire Route 6 to be commissioned in 2026.

53. Mr Tony TSE enquired about the progress of works of CKR and TKO-LTT. Stressing the importance of Trunk Road T2 which would serve a function similar to that of CWB in providing an alternative route to Harcourt Road, Mr TSE asked if works on the project could be expedited.

54. DS for TH(T)1 said that the progress of works on both projects was satisfactory. TKO-LTT was anticipated to be completed by 2021, while works on CKR had commenced in 2017 and was anticipated to be completed by 2025. In response to Mr Tony TSE on the time gap of completion of CKR in 2025 and Trunk Road T2 in 2026, DS for TH(T)1 said that the completion of CKR and TKO-LTT respectively would still contribute towards traffic improvement.

55. Mr AU Nok-hin asked if consideration had been given to undertaking works on Trunk Road T2 by sections such that traffic congestion might not occur in the entire road, as in the case of the Kwun Tong Bypass which had heavy traffic during peak hours only in the section between Laguna City and Kowloon Bay.

56. In response, PM(E), CEDD explained that Trunk Road T2 would not have independent interchanges to enable its operation by sections, and it would have to be in conjunction with CKR for operation. On the other hand, PM(E), CEDD pointed out that there were slip roads in Kai Tak South Apron, such that Hoi Bun Road, together with Cheung Yip Street and Shing Cheong Road for which road widening works were being undertaken could be connected to CKR directly in 2025.

57. Mr AU Nok-hin remarked that the opening of TKO-LTT might attract users and cause traffic jam in certain roads such as the Kwun Tong Bypass and Hoi Bun Road. He enquired if temporary road management

measures were in place to address such a concern. Chief Engineer (Major Projects), TD ("CE(MP), TD") said that it was anticipated that some drivers from TKO to Kwun Tong would still prefer to use the TKO Tunnel before the completion of Trunk Road T2 and CKL Tunnel. They would be attracted to TKO-LTT when Trunk Road T2 and CKL Tunnel were commissioned, as this would expedite connection to West Kowloon.

58. Ms YUNG Hoi-yan expressed support for the project which would ease traffic for TKO. She enquired about the time required for travelling from TKO to West Kowloon via TKO-LTT and Trunk Road T2 during peak and non-peak hours, and if there would be interchanges and roundabouts enroute.

59. CE(MP), TD said that the time required would be reduced significantly from the current 65 minutes to about 12 minutes even during peak hours. PM(E), CEDD supplemented that the three interchanges at TKO, Lam Tin and Kai Tak would all be through roads without traffic lights or roundabouts. The interchange at TKO would be in the form of flyovers above the sea, while the latter two interchanges would partly be in the form of tunnels and partly in the form of flyovers.

60. Mr CHAN Chi-chuen followed up on his concern raised at the relevant PWSC meeting about the absence of a toll plaza at the Trunk Road T2 and CKL Tunnel, to which the Administration had responded that there was no plan to charge users. Mr CHAN sought the Administration's confirmation that there would not be any plans for charging in future.

61. DS for TH(T)1 affirmed that the Administration had no plan to charge users of Trunk Road T2 and CKL Tunnel because the project was for providing an alternative route for users of the Kwun Tong Road, Kwun Tong Bypass and Kai Fuk Road which were all toll free. The Administration did not see a need for charging from the policy angle of traffic management.

#### Impact on hospital operation

62. Mr CHAN Chun-ying sought response on how the Administration would tie in the works of the Trunk Road T2 project to minimize the impacts to the sensitive medical equipment and the normal operation of NAH, given that the completion of NAH would be deferred from 2024 to 2025. Dr KWOK Ka-ki also sought elaboration on the extra expenses to be incurred if the works for the project under consideration were unable to tie in with those for NAH.



63. In response, PM(E), CEDD advised that priority would be accorded to carrying out works with high noise and vibration levels to minimize the impact on NAH and the Hong Kong Children Hospital. For example, the contract had specified a need for the contractor to strive to minimize using the road of the South Apron Area in the Kai Tak Development Area for delivery of construction materials so as to prevent dust from the site affecting the operation of the hospitals. Notwithstanding the slight delay in the completion of NAH in 2025, the Administration still aimed to accord priority to carrying out the relatively noisy works before completion of NAH.

64. In reply to Mr AU Nok-hin on whether the cost for possible delay in works had been reflected in the project cost, PM(E), CEDD said that the current works schedule enabled works to be duly undertaken, and delay incurring additional funding was not envisaged.

65. Mr WU Chi-wai enquired if works would be phased to avoid affecting the operation of NAH. PM(E), CEDD said that works on the various sections of the project would be undertaken simultaneously, and the Administration would enhance the monitoring of works and communication with local residents to minimize potential impacts.

#### Impact on residents

##### *Community liaison*

66. Mr Jeremy TAM expressed concern on the impact of the works on local residents. He saw a need for the Administration to reach out to residents and alleviate their worries by publishing pamphlets to explain issues such as ventilation vents, construction of landscape deck/park, and traffic arrangements to dispel misconceptions, and setting up booths for handling enquiries and conducting road shows. Mr TAM pointed out that the blasting works underground might cause damage to the structures above and trigger complaints, and the Administration should not wait till then for taking follow-up actions.

67. DS for TH(T)1 said that the Administration would conduct more public education to enhance residents' understanding of the effectiveness of the road works and their impact on residents. On this response, Ms Claudia MO remarked that the mindset of conducting "public education" was inappropriate in present day circumstances. The role of the Administration should be in providing more information to facilitate citizens' understanding of issues concerned to enable them to make informed choices.

68. DS for TH(T)1 assured members that the Administration had maintained liaison with villagers, and cases arising would be handled under the established procedures. She supplemented that the 2019 Policy Address had announced the plan for resuming private land in, inter alia, the CKL Village through the Lands Resumption Ordinance (Cap. 124) to expedite its development. In this respect, CEDD had commenced a study with a view to making proposals on the zoning plan, measures and time schedule by the end of 2020.

69. PM(E), CEDD added that the Administration had pledged to set up a community liaison group to enhance communication with the community, and a community liaison centre would be set up at the Kai Tak South Apron for the purpose.

70. Mr HO Kai-ming held the view that setting up the community liaison centre in Kai Tak was inconvenient to residents of the CKL Village. He suggested making use of either the centre currently used for the TKO-LTT community liaison group or the unused public pier near the CKL Village. PM(E), CEDD undertook to liaise with the Lands Department to see if the site currently used for the TKO-LTT community liaison centre could be made available.

#### *Claims mechanism*

71. As the CKL Village comprised mainly squatters, Mr Jeremy TAM expressed concern that residents might be worried that the works would create cracks in their squatters thus posing safety risks. He asked if the Administration had in place interim solutions for resolving issues at an early stage, such as compensation or public housing for affected residents. DS for TH(T)1 explained that no works would be carried out on the ground surface of the CKL Village and hence land resumption and compensation would not be involved.

72. Mr WU Chi-wai remained concerned as the squatters were particularly vulnerable, and asked if the Administration would take snapshots of structures in the CKL Village before works commencement. On the proposal for the development of the CKL Village, Mr WU urged the Administration to enhance monitoring so as not to affect residents unduly. In response, PM(E), CEDD affirmed that photos would be taken prior to commencement of works on the Trunk Road T2 and CKL Tunnel project. He added that the section of the tunnel under CKL Village would be constructed using non-blasting methods.

73. Mr LEUNG Yiu-chung said that blasting works in previous works projects had led to disputes between residents and contractors. As such, he requested the Administration to prepare a detailed and overall record and photos of each and every household in the CKL Village in order to be fair to residents and avoid disputes. Mr Wilson OR and Mr AU Nok-hin expressed similar concerns. Mr OR asked if the Administration would announce publicly that the blasting works would not affect the daily livelihood of citizens, and pledge that it would follow up if the blasting works resulted in structural damages. Mr AU enquired about measures for detecting and monitoring possible damages and the specific procedures for making claims, as well as whether the project cost included compensation for affected households.

74. PM(E), CEDD reiterated that pre-condition surveys would be undertaken including photos to be taken both inside and outside the existing structures, and monitoring points would be set up to monitor the vibration and settlement caused by the works. As regards the claims mechanism, PM(E), CEDD said that it would be necessary to ascertain the causes of problems. If damage was proved to be caused by the works, the relevant contractors would have to bear responsibility. CE(E3), CEDD added that monitoring points would be set up in the CKL Village to monitor the works and facilitate adjustments to be made where necessary.

75. Mr Alvin YEUNG enquired if the consultancy firm responsible for the site investigation works for the Trunk Road T2 project was the same as that for the Shatin to Central Link ("SCL"). PM(E), CEDD provided the name of the consultancy firm of the Trunk Road T2 and CKL Tunnel project, which was employed among competent consultants via established procurement procedures, but indicated that information was not in hand about the consultancy firm for SCL. At Mr YEUNG's request, the Administration undertook to provide in writing the details of the consultancy firm responsible for site investigation works for the Trunk Road T2 and CKL Tunnel project, including whether the same firm had been responsible for the site investigation works for SCL.

*[Post-meeting note: The supplementary information provided by the Administration was issued to members vide LC Paper No. FC136/19-20(01) on 20 March 2020.]*

76. Mr Alvin YEUNG explained that he had referred to SCL in particular because its works had caused cracks in residential units in To Kwa Wan but the MTR Corporation Limited had refused to bear responsibility. He was worried that residents of the CKL Village would face the same problem arising from the Trunk Road T2 and CKL Tunnel

project. Mr YEUNG asked if the Administration would pledge to follow up upon being approached by residents of the CKL Village if such unfortunate incidents occurred.

77. DS for TH(T)1 appreciated Mr YEUNG's concern. She affirmed that the Administration would duly follow up on complaints made by residents who were affected by the works, in accordance with the established procedures for persons affected by public works programmes.

#### *Development of Cha Kwo Ling Village*

78. Mr James TO expressed concern on the announcement in the 2019 Policy Address for the development of CKL Village and possible land resumption, and enquired about its impact on residents.

79. DS for TH(T)1 explained that the Trunk Road T2 and CKL Tunnel project and the development of the CKL Village were two separate issues. She reiterated that as works for the project under consideration would be undertaken beneath the ground surface of the CKL Village, land resumption would not be involved. On the other hand, the proposal in the Policy Address was for expediting the development of the CKL Village through Cap. 124. The Development Bureau was currently conducting the related study for completion by the end of 2020. DS for TH(T)1 said that when more details became available by then, the Administration would review and tie in the works schedule and arrangements of the Trunk Road T2 and CKL Tunnel project with the proposed development of the CKL Village.

80. In response to Mr James TO's further enquiry on whether the underground works of the Trunk Road T2 and CKL Tunnel project would impact on the future development potential of the CKL Village, DS for TH(T)1 said that the co-existence of underground and aboveground developments was not uncommon in Hong Kong. The main concern would be for strengthening the structure underground to address the loading concern and enable the construction of structures aboveground. PM(E), CEDD explained that various engineering means could be deployed for such a purpose, such as by strengthening the structural lining of a tunnel. A lining with a thickness of 350 mm had been planned for the CKL Tunnel, and its thickness could be increased if necessary to enhance the development potential aboveground. Another consideration would be the level of the piles. As the bedrock near the CKL Tunnel was relatively high, the piles might already sit on the rock well above, in which case the afore-mentioned strengthening works might not even be necessary. PM(E), CEDD said that it would all depend on the future development of

the CKL Village. Given that construction works for the Trunk Road T2 and CKL Tunnel project would span over a long period from 2020 to 2026, there would be sufficient time to address such concerns.

81. Mr WU Chi-wai expressed worry about the possibility of the CKL Tin Hau Temple and Law Mansion in the CKL Village being affected by future proposals for the development of the CKL Village. He enquired about the works schedule and measures to be undertaken, as well as costs to be incurred, for tying in works of the Trunk Road T2 project with the future proposals.

82. DS for TH(T)1 said that the Trunk Road T2 and CKL Tunnel project had been proposed with the assumption that the said historic buildings as well as the CKL Village would continue to exist, and the project cost had allowed for avoiding impact to these historic buildings. She reiterated the Administration's determination to tie in works on the Trunk Road T2 and CKL Tunnel project with future proposals for the development of the CKL Village.

83. In response to Mr WU Chi-wai's further enquiry on whether there was a deadline for the tying in of works, DS for TH(T)1 reiterated that CEDD was currently studying the proposal for the development of the CKL Village and would make proposals by the end of 2020. As works on the Trunk Road T2 and CKL Tunnel project would be undertaken between now and 2026, there would be time for the Administration to cater to the requirements in the future proposals.

#### Voting on FCR(2019-20)14

84. At 6:14 pm, the Chairman put item FCR(2019-20)14 to vote. The Chairman declared that the majority of the members present and voting were in favour of the item. The item was approved.

#### **Item 2 — FCR(2019-20)36**

#### **RECOMMENDATION OF THE PUBLIC WORKS SUBCOMMITTEE MADE ON 14 MAY 2019**

#### **PWSC(2019-20)2**

#### **HEAD 709 — WATERWORKS**

#### **Water Supplies — Fresh water supplies**

#### **357WF — Design and construction for first stage of desalination plant at Tseung Kwan O**

85. The Chairman advised that this item sought the approval of FC for the recommendation of PWSC made at its meeting on 14 May 2019, i.e., the recommendation in PWSC(2019-20)2 to recommend to FC the upgrading of the remainder of 357WF to Category A at an estimated cost of \$7,727.5 million in MOD prices for carrying out the design and construction of the first stage of the desalination plant at Tseung Kwan O (“TKO”). The item had been discussed by PWSC for about two hours, and the Administration had provided supplementary information.

86. The Chairman declared that he was an executive director and chief executive officer of Well Link Insurance Group Holdings Limited.

### Water resource planning

#### *Production capacity*

87. Mr CHAN Chi-chuen expressed support for the project. He stressed the importance of fresh water supply, which in Singapore was regarded as a strategic national security facility. He considered that fresh water supply for Hong Kong should be from multi-channels instead of relying on a particular source such as importing water from Dongjiang (“DJ”). As such, the desalination plant at TKO should operate on a larger scale and to its fullest capacity. Mr CHAN enquired how the goal of water production was set, and the respective weightings given to the technical assessment, experience and price assessment when evaluating the tenders.

88. Deputy Secretary for Development (Works)2 (“DS for DEV(W)2”) said that although local water supply together with water imported from DJ was more cost-effective, such supply might be affected by climate change. In order to combat this problem, the Administration had proposed the construction of the desalination plant as an alternative water resource not susceptible to climate change. On account of the positioning of the desalination plant for coping with the extreme dry weather that could be brought about by climate change, its normal operation would not need to be up to its capacity at all time. The average fresh water production of the desalination plant would be about one-quarter to one-third of its capacity. The operation of the desalination plant would help relieve the pressure on the aging Pak Kong Water Treatment Works and enable staff of Water Supplies Department (“WSD”) to gain hands-on experience with its operation.

89. Mr Gary FAN recalled the Administration having advised during the PWSC meeting in May 2019 that the plant would produce about 40 000 m<sup>3</sup> to 50 000 m<sup>3</sup> of water per day which, together with water from the Pak Kong Water Treatment Works, would cater for the demand of about 1.4 million population in TKO, East Kowloon and Hong Kong Island East. He enquired how long such a period would last, the target year in which the plant would be operated to its full capacity to produce 135 000 m<sup>3</sup> per day, and whether the target timing for full capacity operation could be advanced to reduce the reliance on DJ water.

90. DS for DEV(W)2 stated that the desalination plant was positioned to cope with the impact of climate change on water resources. Its fresh water production output would depend on the operation need, and the production of fresh water up to its capacity of 135 000 m<sup>3</sup> per day would not be necessary at all time under normal circumstances. As such, no timetable had been set for operating the desalination plant up to its capacity at all time. DS for DEV(W)2 said that the proposal for increasing the fresh water production of the desalination plant to replace DJ water would not be cost-effective on the one hand, and would create environmental concerns on the other hand as desalination involved relatively high energy consumption and hence carbon emission.

91. Dr LO Wai-kwok said that members belonging to the Business and Professionals Alliance for Hong Kong were in support of the project. He recalled LegCo Members having visited Guangdong in 2017 for a study of the DJ water supply system. Notwithstanding the reliability of the system, Dr LO agreed with the need for an alternative water source through the use of new technology to tackle the challenge posed by the inadequate supply of fresh water. He also recalled another study conducted by LegCo Members in 2017 to Israel on its desalination plant and where the reverse osmosis technology similar to that for the plant in TKO was used despite the high cost. Dr LO said that the current FC meeting provided an opportunity for the Administration to assure the public of the worthiness of the project and the standard of fresh water supply in Hong Kong. On the Administration's schedule for the desalination plant to meet 5% of the fresh water demand of Hong Kong in the first stage and increasing it to 10% in the second stage, Dr LO enquired when the second stage would commence.

92. On Dr LO's former concern, DS for DEV(W)2 explained that WSD staff would take water samples to monitor the quality of the fresh water produced from the desalination plant and ensure compliance with the Hong Kong Drinking Water Standards, which essentially followed the guidelines of the World Health Organization. As for Dr LO's latter concern, DS for

DEV(W)2 said that there was no implementation programme for the second stage of the TKO desalination plant at the moment, as the implementation of the second stage of the desalination plant would depend on various factors such as the impact of climate change, population growth and effectiveness of the various water demand management measures.

93. In response to Ms Elizabeth QUAT on the reason for not planning for stage two, DS for DEV(W)2 reiterated that the positioning of the desalination plant was for coping with the impact of climate change. However, the Administration would not dispel the need for other new desalination plants in the future when planning for water supply in individual development areas, where conventional water sources and desalination would be evaluated to identify the suitable one for the development areas.

#### *Works schedule*

94. Mr Tony TSE said that the problems of global warming and droughts had made water increasingly precious worldwide, and overseas countries were all trying to identify means for solving the problem. Hong Kong was fortunate to have rainfall and DJ water supply which other Mainland cities were also competing for. With the development of new and improved technology in desalination, the construction of the desalination plant in Hong Kong was worthy of support. Mr TSE sought elaboration on the meaning of the "tight programme", as stated in paragraph 5 of the PWSC paper under consideration, which necessitated the early invitation of tender.

95. DS for DEV(W)2 explained that works for the desalination plant project comprised two parts. The first part was the construction of fresh water mains for connecting the proposed desalination plant to the TKO Fresh Water Primary Service Reservoir, for which funding approval had been obtained and construction was scheduled for completion by mid-2022. The second part was the construction of the desalination plant. The Administration hoped to commence works on the second part as soon as funding approval was obtained from FC, and had hence invited tender in parallel, in order that the desalination plant would be commissioned as soon as possible to cope with the impact of climate change. In response to Mr TSE on the practicality of such an approach, DS for DEV(W)2 assured members that the Administration would neither unreasonably compress the works schedule nor compromise the quality of works.



*Long-term planning*

96. Dr Helena WONG said that members belonging to the Democratic Party were in support of the project. However, she criticized the Administration for its narrow vision in positioning the plant as only for coping with the impact of climate change and producing water to meet only 5% of fresh water demand in Hong Kong, which was barely sufficient to offset the leakage of fresh water from aged water mains. She urged the Administration to tackle the issue from a broader prospect and with a long-term planning by building more water infrastructures, and reduce reliance on DJ water by stages. She added that if Hong Kong continued to rely on the import of DJ water, it would have a weak bargaining power when negotiating for the DJ contract once every three years. She cautioned that the cost of DJ water at \$9/m<sup>3</sup> might increase.

97. DS for DEV(W)2 said that local yield together with DJ water would be sufficient to cope with drought situation. He pointed out that in the past one hundred years, the driest year was in 1963 when an annual rainfall of 901 mm was recorded and this rainfall intensity could produce annual yield of about 50 to 60 million cubic metres through the current local catchment system. DS for DEV(W)2 reiterated that with the current portfolio of local yield and DJ water, the proposal of implementation of the first stage of desalination plant in TKO would be adequate for providing a strategic water resource to cope with the impact of climate change, having regard to the considerations of cost effectiveness and environmental concerns.

*Overseas studies*

98. Mr CHU Hoi-dick said that given that climate change was already taking place, the construction of the desalination plant should not be for coping with the impact of climate change. Rather, it should be for coping with the increased opportunities for extreme weather which in turn would result in inadequate fresh water supply. On the other hand, although the Administration had stated in paragraph 17 of the PWSC paper concerned that the project would not cause any adverse environmental impacts, Mr CHU said that studies overseas had indicated otherwise. These studies showed that the submarine intake would suck fry and other fish resources into the desalination plant. Separately, emissions from desalination plants into the sea would, when coupled with the rising seawater temperature, reduce the level of dissolution of oxygen in the seawater and be harmful to the marine ecology and expedite the impact of climate change. Mr CHU expressed concern that the trend for the increase in the number of

desalination plants would result in intolerable damages. The Administration took note of Mr CHU's views and concerns.

### Cost considerations

#### *Project cost*

99. Mr CHAN Chi-chuen pointed out that the project cost had been reduced from \$9,077 million when it was discussed by the Panel on Development in April 2018, to \$7,700 million when considered by PWSC in May 2019. He enquired if there was room for further reduction. In reply, DS for DEV(W)2 said that the project cost had been adjusted having regard to the prices of the tenders received.

100. Mr Tony TSE asked if there would be any adjustment in the tender price given that the tender bid was made in 2018 when prices were relatively high. DS for DEV(W)2 said that there was a price adjustment provision in the contract which would cater for price fluctuation.

101. Ms Elizabeth QUAT said that members belonging to the Democratic Alliance for the Betterment and Progress of Hong Kong were supportive of the project. She was concerned with the problems of inadequate fresh water supply and global warming, and trusted the impact of climate change would worsen. As such, Hong Kong should not rely just on the local water catchment and DJ water but should explore new resources to stabilize the supply of fresh water. Having visited desalination plants overseas including Israel to understand their operation, Ms QUAT pointed out that the key expenses were on electricity tariff and the reverse osmosis membrane, the usage and management of which would impact significantly on its durability. Given that the proposed works of the desalination plant at TKO would be implemented under a Design-Build-Operate ("DBO") contract arrangement, Ms QUAT enquired if the Administration would provide any incentive to encourage the contractor to strive to use renewable energy and reduce electricity tariff, and also prolong the durability of the reverse osmosis membrane to minimize its need for replacement, thereby reducing the overall operation cost.

102. Director of Water Supplies ("D of WS") explained that under the DBO contract arrangement, the contractor should be cautious in its design for the desalination plant taking into account the costs both at the construction and operation stages. As the contract price would also cover the operation cost, the profit of the contractor would be higher if its operation cost was lower. As such, the DBO contract arrangement was in

itself an incentive for the contractor to achieve cost-saving in its operation of the desalination plant. D of WS added that the contractors participating in the tender process had gone through a pre-qualification exercise. They were internationally acclaimed companies possessing rich experience in the operation of desalination plants.

*Cost effectiveness*

103. Mr AU Nok-hin expressed concern on the cost effectiveness of the project. He quoted the Administration's advice, in response to his previous enquiry regarding the cost for desalination in overseas cities, that comparison of unit cost was inappropriate on account of differences in factors such as local energy cost and energy efficiency of desalination facilities. As the absence of such information made it difficult to assess the cost effectiveness of the project, Mr AU requested the Administration to provide such information for reference. He also referred to Note 3 of the PWSC paper under consideration, and enquired how the factors listed therein (i.e. energy cost, seawater quality and temperature, intake arrangement, environmental measures, financing details, specific details of the water purchase agreement, etc.) would affect the unit production cost of the desalination plant in TKO.

104. In response, DS for DEV(W)2 said that the footnote concerned had also provided the unit cost for producing fresh water by seawater desalination overseas in the range of around \$3/m<sup>3</sup> to \$50/m<sup>3</sup> according to the International Desalination Association. He supplemented that the unit production cost at the desalination plant in Hong Kong would be at the medium level of about \$13/m<sup>3</sup>. DS for DEV(W)2 explained that the major factor affecting cost was the salinity of the seawater, where higher salinity would incur higher desalination cost. Another factor was the standard of fresh water quality required. The seawater quality would also impact on its pre-treatment cost. These apart, the electricity tariff would also impact on the cost for the operation of the desalination plant.

105. The meeting ended at 6:57 pm.