

立法會
Legislative Council

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(These minutes have been seen
by the Administration)

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

**Minutes of the 22nd meeting
held in Conference Room 1 of the Legislative Council Complex
on Tuesday, 14 May 2019, at 2:30 pm**

Members present:

Ir Dr Hon LO Wai-kwok, SBS, MH, JP (Chairman)

Hon Charles Peter MOK, JP (Deputy Chairman)

Hon Abraham SHEK Lai-him, GBS, JP

Hon Tommy CHEUNG Yu-yan, GBS, JP

Hon Starry LEE Wai-king, SBS, JP

Hon CHAN Hak-kan, BBS, JP

Dr Hon Priscilla LEUNG Mei-fun, SBS, JP

Hon Claudia MO

Hon Michael TIEN Puk-sun, BBS, JP

Hon WU Chi-wai, MH

Hon MA Fung-kwok, SBS, JP

Hon CHAN Chi-chuen

Hon CHAN Han-pan, BBS, JP

Hon LEUNG Che-cheung, SBS, MH, JP

Hon Alice MAK Mei-kuen, BBS, JP

Dr Hon KWOK Ka-ki

Dr Hon Fernando CHEUNG Chiu-hung

Dr Hon Helena WONG Pik-wan

Hon Alvin YEUNG
Hon Andrew WAN Siu-kin
Hon CHU Hoi-dick
Dr Hon Junius HO Kwan-yiu, JP
Hon HO Kai-ming
Hon Holden CHOW Ho-ding
Hon Wilson OR Chong-shing, MH
Hon CHEUNG Kwok-kwan, JP
Hon LUK Chung-hung, JP
Hon LAU Kwok-fan, MH
Dr Hon CHENG Chung-tai
Hon KWONG Chun-yu
Hon Jeremy TAM Man-ho
Hon Gary FAN Kwok-wai
Hon AU Nok-hin
Hon Vincent CHENG Wing-shun, MH
Hon Tony TSE Wai-chuen, BBS
Hon CHAN Hoi-yan

Member attending:

Hon SHIU Ka-fai

Members absent:

Hon Frankie YICK Chi-ming, SBS, JP
Hon Tanya CHAN
Hon HUI Chi-fung

Public officers attending:

Mr Raistlin LAU Chun, JP

Deputy Secretary for Financial Services
and the Treasury (Treasury)³

Mr LAM Sai-hung, JP

Permanent Secretary for Development
(Works)

Ms Bernadette LINN, JP	Permanent Secretary for Development (Planning and Lands)
Mr Elvis AU Wai-kwong, JP	Deputy Director of Environmental Protection (1)
Mrs Cherry TSE LING Kit-ching, JP	Permanent Secretary for Home Affairs
Ms YING Fun-fong, JP	Project Manager (HAB) Home Affairs Bureau
Ms Winnie HO Wing-yin, JP	Deputy Director of Architectural Services
Mr Chris LEE Wing-keung	Senior Project Manager 240 Architectural Services Department
Mr Terrance TSANG Wing-hung	Assistant Director of Fire Services (Headquarters)
Mr WONG Yuk-ping	Senior Divisional Officer (Planning Group) (Acting) Fire Services Department
Mr David NGU Chi-vi	Chief Traffic Engineer (Kowloon) Transport Department
Mr Jimmy CHAN Kam-leung	Senior Engineer (Strategic Studies)5 Transport Department
Ms Alice PANG, JP	Project Manager (South) South Development Office Civil Engineering and Development Department
Mr Edmund CHAN Ping-wa	Chief Engineer (South 2) South Development Office Civil Engineering and Development Department
Mr Vincent MAK Shing-cheung, JP	Deputy Secretary for Development (Works)2
Mr WONG Chung-leung, JP	Director of Water Supplies

Ms Irene PANG Oi-ling	Assistant Director of Water Supplies (New Works) (Acting)
Mr LAM Shing-tim	Chief Engineer (Consultants Management) Water Supplies Department
Mr TSE Chin-wan, BBS, JP	Under Secretary for the Environment
Mr Paul WONG Yan-yin	Principal Assistant Secretary for the Environment (Energy)
Mr Harry LAI Hon-chung, JP	Deputy Director of Electrical and Mechanical Services (Regulatory Services)
Mr LO Kam-cheung	Chief Engineer (Energy Efficiency B) Electrical and Mechanical Services Department

Attendance by invitation:

Mr Jeremy STOWE	Chief Projects Officer West Kowloon Cultural District Authority
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Clerk in attendance:

Ms Doris LO	Chief Council Secretary (1)2
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Staff in attendance:

Mr Raymond CHOW	Senior Council Secretary (1)10
Miss Queenie LAM	Senior Legislative Assistant (1)2
Ms Christina SHIU	Legislative Assistant (1)2
Ms Christy YAU	Legislative Assistant (1)8
Ms Clara LO	Legislative Assistant (1)9
Miss Joey LAW	Clerical Assistant (1)2

The Chairman advised that there were six discussion papers on the agenda for the meeting. The first to third, fifth and sixth items were funding proposals carried over from the previous meeting. The fourth item was a new funding proposal submitted by the Administration. He 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 proposals. He also drew members' attention to Rule 84 of RoP on voting in case of direct pecuniary interest.

Head 703 – Buildings

PWSC(2018-19)46 175BF Relocation of supporting operational facilities of Tsim Sha Tsui Fire Station Complex, Fire Services Club and other Fire Services accommodations to To Wah Road, Kowloon

Head 707 – New Towns and Urban Area Development

754CL Infrastructure Works for West Kowloon Cultural District, phase 1

763CL Integrated Basement for West Kowloon Cultural District – remaining works

2. The Chairman advised that the proposal (i.e. [PWSC\(2018-19\)46](#)) sought to upgrade 175BF, part of 754CL and 763CL to Category A at an estimated cost of \$981.2 million, \$380 million and \$17,472.3 million in money-of-the-day ("MOD") prices respectively, in order to dovetail with the phased implementation of the West Kowloon Cultural District ("WKCD"). The Subcommittee began the discussion of the proposal at the meeting on 8 May 2019 and the discussion now continued.

3. The Chairman declared that he was a board member of the West Kowloon Cultural District Authority ("WKCDA"), but he did not have any pecuniary interest relating to the funding proposals.

175BF – Relocation of supporting operational facilities of Tsim Sha Tsui Fire Station Complex, Fire Services Club and other Fire Services accommodations to To Wah Road, Kowloon

Relocation of facilities of Tsim Sha Tsui Fire Station Complex

4. Mr AU Nok-hin noted that according to the Stage 1 Public Engagement Report of the Pilot Study on Underground Space Development in Selected Strategic Urban Areas, in order to dovetail with the development of WKCD, the Administration proposed to construct a footbridge at the site of the Tsim Sha Tsui Fire Station Complex after its relocation to link WKCD to the Kowloon Park. Mr AU sought details of the footbridge; and that if the Underground Space Development in Tsim Sha Tsui West mentioned in the Study was materialized, what impacts it would have on the services of the Tsim Sha Tsui Fire Station.

5. Project Manager (HAB) of Home Affairs Bureau ("PM(HAB)) responded that the construction of the footbridge at the site was still under planning given that the timetable for the relocation of the Tsim Sha Tsui Fire Station had not been finalized. The Administration was unable to provide further details to members at present. The emergency services provided by the Tsim Sha Tsui Fire Station would not be affected before a suitable site was identified for the relocation of its operational facilities.

6. Mr CHU Hoi-dick pointed out that according to the enhanced financial arrangement for WKCD implemented by the Government, the development right of the hotel/office/residential ("HOR") portion of WKCD would be granted to WKCDA. Mr CHU asked whether the existing site occupied by the Tsim Sha Tsui Fire Station was located within the HOR portion of WKCD; and if it was, about the respective floor areas to be used for hotel, office and residential developments and the estimated costs involved in the developments concerned.

7. PM(HAB) confirmed that the existing site occupied by the Tsim Sha Tsui Fire Station was planned to be part of the HOR development project. According to the Administration's initial thinking, the project would produce a floor area of about 24 000 square metres ("sq m") and the planning might be suitably adjusted in the future. Moreover, the Administration would take into consideration the relocation timetable of the Tsim Sha Tsui Fire Station when it reviewed the short, medium and long-term financial positions of WKCDA.

Relocation of Fire Services Club in Kowloon Bay

8. Mr Tony TSE requested the Administration to provide supplementary information about details of the future public housing and school development on the existing site of the Fire Services Club in Kowloon Bay, including the types and number of public housing units to be built and whether primary or secondary schools would be built. He also urged that after the relocation of the Kowloon Bay Fire Services Club, the Administration should immediately

take forward the development concerned to avoid leaving the land idle so as to achieve a seamless effect. The Administration undertook to provide the information requested by Mr TSE after the meeting.

(Post-meeting note: The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC278/18-19\(01\)](#) on 19 August 2019.)

Proposed construction of a new building at To Wah Road

9. Dr Helena WONG declared that she was the owner of a residential unit in Sorrento, a property development on the superstructure of Kowloon Station. Dr WONG noted that the Transport Department ("TD") was considering the construction of an underground public car park at the site of the temporary bus terminus adjacent to the proposed new building to be built at To Wah Road. She said that many residents living in properties above Kowloon Station opposed the construction of the car park at the site and expressed concern that the additional traffic brought about by the commissioning of the car park would overload the nearby Jordan Road. Dr WONG enquired whether the consultant entrusted by the Architectural Services Department ("ArchSD") to conduct the traffic impact assessment ("TIA") on the proposed new building at To Wah Road had also assessed the impact of the proposed car park on the traffic along To Wah Road and Jordan Road; if not, whether a TIA would be required should the Administration decide to go ahead with the construction of the underground car park and whether the Administration would directly consult the residents in the nearby area on the construction of the proposed car park.

10. Chief Traffic Engineer (Kowloon), TD responded that TD would consider, under the principle of "single site, multiple use", providing an underground public car park at the "open space" site next to the proposed project. TD, together with the relevant government departments, was conducting preliminary discussion and assessment on the demand for parking spaces in the area in order to determine the number and types of parking spaces that could be provided in the proposed car park, and ascertain the impact on the traffic in the area. At present, TD was yet to formulate the specific details of the plan for the proposed car park. Meanwhile, TD already communicated with members of the local community regarding their concerns about the plan and would consult them again on the plan in the future. Since the details of the plan were yet to be finalized, the consultant entrusted by ArchSD to conduct TIA of the proposed new building at To Wah Road would not assess the traffic impact of the plan for the proposed

car park. When the specific details of the plan for the proposed car park were finalized, the Administration would conduct another TIA for it.

11. Dr Helena WONG noted that the barrier-free access plan shown in Annex 8 to Enclosure 1 of the discussion paper wrongly included an accessible lift at the Jordan Road footbridge near Sorrento, and the error was corrected in the supplementary information paper ([LC Paper No. PWSC208/18-19\(02\)](#)). Dr WONG pointed out that there was no accessible lift at the Jordan Road footbridge near Sorrento and the Guangzhou–Shenzhen–Hong Kong Express Rail Link ("XRL") West Kowloon Station. This created much inconvenience to wheelchair users. She requested the Administration to come up with a solution to the problem with the installation of accessible lifts at the above locations before submitting the relevant funding proposal to the Finance Committee ("FC") for consideration.

12. Deputy Director of Architectural Services undertook that ArchSD would follow up with government departments such as TD on the planning of barrier-free access facilities at the Jordan Road footbridge, so as to ensure that people with such a need could gain access to the proposed new building at To Wah Road through the footbridge. In response to Dr Helena WONG's request, the Administration would provide supplementary information on whether barrier-free access facilities would be added to the Jordan Road footbridge near Sorrento and the XRL West Kowloon Station to facilitate easy access of the public to Jordan Road and the proposed new building at To Wah Road.

(Post-meeting note: The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC278/18-19\(01\)](#) on 19 August 2019.)

13. Mr AU Nok-hin expressed concern over the reprovisioning of dangerous goods stores in the proposed new building at To Wah Road which was in the vicinity of the CLP Power Hong Kong Limited Centenary Substation ("Substation"). He enquired how the Administration would lower the fire safety hazard concerned.

14. Assistant Director of Fire Services (Headquarters) ("AD(H)/FSD") responded that the Fire Services Department ("FSD") had conducted a detailed risk assessment on the location of the dangerous goods stores in the proposed new building at To Wah Road. The assessment report indicated that the dangerous goods stores and the Substation would be approximately 15 metres ("m") apart, which was greater than the safety distance of six m required. It would thus be safe to reprovision the dangerous goods stores to

that location. FSD would also ensure that the fire safety facilities of the dangerous goods stores complied with the relevant requirements.

754CL – Infrastructure Works for West Kowloon Cultural District, phase 1

Design and project costs of the proposed Artist Square Bridge

15. Dr Helena WONG expressed support for the proposed Artist Square Bridge ("the proposed bridge") project. Dr Fernando CHEUNG and Mr CHU Hoi-dick noted that the total costs of the proposed bridge under the new design would amount to \$380 million, of which about \$280 million would be used on bridge construction (lower than the approximately \$400 million based on the original design) and the rest were the costs for the associated works, environmental mitigation measures and related environmental monitoring and auditing. Dr CHEUNG and Mr CHU requested the Administration to provide the total project estimates of the proposed bridge under its original design to comprehensively show the differences of the two designs. Dr CHEUNG also asked for a breakdown of the \$280 million for bridge construction. Mr CHU and Mr Gary FAN enquired about the respective lengths of the proposed bridge under the original design and the latest design. They also requested the Administration to provide more details on the 18 m of the bridge which would be shortened under the new design.

16. PM(HAB) explained that the aforesaid \$280 million project estimates included the works costs for the bridge (\$220.7 million) in item (a) and the works costs for lifts, escalators and staircases (\$59.3 million) in item (b), as set out in paragraph 17 of Enclosure 2 to the discussion paper. The Administration would provide other information requested by members after the meeting.

(Post-meeting note: The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC278/18-19\(01\)](#) on 19 August 2019.)

17. Mr AU Nok-hin enquired how the Administration had come to change the original design of the proposed bridge to the new design, and whether it had listened to the views of members and members of the local community in the process. Mr CHU Hoi-dick noted that the sectional diagram showing the new design of the proposed bridge which the Administration submitted to the Joint Subcommittee to Monitor the Implementation of the West Kowloon Cultural District Project ("the Joint Subcommittee") (as set out in [LC Paper No. CB\(1\)908/17-18\(01\)](#)) in May 2018 was different from the one it submitted to the Public Works Subcommittee now (as set out in Annex 1 to

Enclosure 2 to [PWSC\(2018-19\)46](#)). He enquired whether the Administration had altered the new design of the proposed bridge.

18. Permanent Secretary for Home Affairs ("PSHA") said that after reviewing the views on the original design of the proposed bridge expressed by the majority members of the Joint Subcommittee in the meeting in April 2017, the Administration adopted a simpler design. Project Manager (South), South Development Office, Civil Engineering and Development Department ("PM(S)/CEDD") added that after briefing the Joint Subcommittee on the new design of the proposed bridge in May 2018, the Administration further enhanced the design by adopting direct bearing of the bridge onto the building structure of the existing development at MTR Kowloon Station to reduce the number of supporting piers of the bridge.

19. Mr Tony TSE opined that the Administration should urge WKCD to let more local professionals take part in the design of the Artist Square. PSHA replied that the Administration had mechanisms to monitor the quality of works undertaken by WKCD, but recruitment matters were the responsibility of WKCD. Mr Jeremy STOWE, Chief Projects Officer, WKCD replied that the original design of the bridge was provided by an overseas design team and the new design was provided by a local design team.

Pedestrian flow of the proposed Artist Square Bridge

20. Mr Gary FAN requested the Administration to provide details of the computer simulation study conducted by WKCD on the estimated pedestrian flow of the proposed bridge, including the expected daily pedestrian flow, the pedestrian flow to the Artist Square Development Area via the two existing routes across Nga Cheung Road or Green Plaza, and the expected volume of pedestrian flow that would be redirected to the proposed bridge.

21. PM(S)/CEDD responded that people could gain access to WKCD through several routes, and the proposed bridge would be one of them. Moreover, WKCD made the computer simulation estimation of the designed capacity of the proposed bridge based on the venue facilities provided in and the uses of different zones of WKCD and the different methods used by the public to access WKCD. The estimation results confirmed that the designed capacity of the proposed bridge could cope with the estimated peak pedestrian flow (two-way) of about 4 600 pedestrians per 30 minutes in 2031. In response to Mr FAN's request, the Administration undertook to provide the information he requested after the meeting.

(*Post-meeting note:* The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC278/18-19\(01\)](#) on 19 August 2019.)

Management and maintenance of the proposed Artist Square Bridge

22. Mr Tony TSE noted that the integrated basement ("IB") would be managed by WKCDA after its completion. A decorative lighting system and ancillary provisions for art installations fixing would be installed on the proposed bridge to match the theme of various WKCD events in future. However, these installations would be managed by the Government. He enquired about the reasons for having two different management arrangements.

23. PSHA and PM(HAB) explained that IB would be managed and maintained by WKCDA as it was located within the site managed by WKCDA and was intricately linked with the topside developments. The proposed bridge, on the other hand, would be managed and maintained by government departments as it was obviously a public passage which would be mainly situated within government land and span over public roads below. However, given that the proposed bridge would be an important gateway to WKCD, the Administration and WKCDA would work together to create a fresh artistic environment (e.g. installing ancillary provisions for art installations fixing) and the two parties would discuss how to share the costs.

24. Mr Alvin YEUNG noted that the supplementary information paper ([LC Paper No. PWSC208/18-19\(01\)](#)) provided by the Administration to the Subcommittee set out a detailed breakdown of the annual recurrent expenditures of \$3 million arising from the proposed bridge. Mr YEUNG asked whether the Administration had adopted the usual practice for estimating the recurrent expenditures of other public bridges when it estimated the maximum annual recurrent expenditures of the proposed bridge, whether it had any objective standards in reviewing the reasonableness of those expenditures (e.g. an annual estimated cost of \$0.95 million for maintaining bridge structures and ancillary provisions), and whether it would invite tenders for the repair and maintenance of the public bridge in a single contract or multiple contracts. Dr Fernando CHEUNG also expressed concern that the estimated annual recurrent expenditures of the proposed bridge might be too high.

25. PM(S)/CEDD responded that repair and maintenance of public bridges was under the purview of the relevant government departments. The departments concerned would follow established procedures in inviting tenders for these repair and maintenance contracts. The Administration

already took into consideration the design features of the higher bridge deck in estimating the annual recurrent expenditures of the proposed bridge. The aforesaid estimate of \$0.95 million would be used for maintaining the footbridge structures and ancillary facilities, and for covering maintenance costs such as greening works maintenance and cleaning. The relatively high bridge deck which necessitated the implementation of temporary traffic arrangements and renting of crane lorries for future bridge structure inspection and repairing, as well as the need to hire better-skilled workers to carry out the routine bridge cleaning, had also been taken into account.

763CL – Integrated Basement for West Kowloon Cultural District – remaining works

Construction cost

26. Dr Helena WONG expressed support for the proposed remaining works of IB. Ms Claudia MO was concerned that the exorbitant construction cost of IB was even higher than the one-off upfront endowment of \$21.6 billion approved by FC in 2008 for WKCD to take forward the WKCD project. Ms MO enquired whether this was the last funding application from the Administration to FC for WKCD related works, and whether users of IB needed to pay any fees.

27. Mr Andrew WAN noticed that the estimated construction cost of IB had already increased from over \$10 billion mentioned by the Administration back in July 2013 to the rough estimate of about \$23 billion (including design and site investigation) in May 2014, and one of the reasons for the cost increase was the delay in the works of the Hong Kong section of XRL. He enquired whether the Administration had assessed the impact of the works delay concerned on the construction cost of IB and the number of days delayed in the works of IB as a result, as well as whether compensation would be sought from the MTR Corporation Limited, and if so, the amount of compensation. Mr WU Chi-wai also enquired about the issue of compensation due to the works delay concerned.

28. PSHA responded that the design of IB was finalized in 2013 following three stages of public engagement exercise. In regard to the construction cost of IB, factors like the need to support the topside developments and provide public facilities like underground road, its large scale and the need to carry out complicated fire safety installation works in the basement, should be taken into consideration. Accordance to the latest estimate by the Administration, the construction cost of IB was about \$23.6 billion, a slight increase of about 2% from the estimated figure in 2014

(about \$23 billion), while the average annual growth rate of construction costs for the public works in the same period of time was about 6%. This was the last funding application from the Administration to FC regarding the IB project. Following the implementation of the works projects concerning other public facilities in WKCD (such as berthing/landing facilities for vessels and remaining underground drainage, sewerage and water supply system), the Administration would submit another funding application in relation to WKCD. Since the Administration had not yet started the tendering procedure for the IB project when it was aware of the works delay concerning the Hong Kong section of XRL, no compensation case related to the XRL works was involved. The underground road of IB was a public facility and no fee would be required from drivers, but drivers would need to pay fees for using the underground car park inside IB.

29. PM(HAB) supplemented that according to the rough estimate in 2014, if the entire IB project could be commenced in 2014 and accomplished in one go, IB could be completed by 2020. However, due to the works delay related to the Hong Kong section of XRL, the completion of the IB project would be postponed to the period from 2025 to 2027 in phases.

30. Ms Claudia MO enquired about the amount of funding estimated by the Administration in the final funding application to be submitted to FC in relation to other works projects on public facilities in WKCD.

31. PSHA and PM(HAB) responded that since the above-mentioned projects were still in the planning or initial designing stage with detailed technical assessment yet to be conducted, the Administration was unable to provide members with the estimated figure on the cost of the works concerned at current stage. Once the estimated figure was available, the Administration would report to members as soon as possible.

32. Mr CHU Hoi-dick enquired whether the Administration could, in case of cost overruns in the IB project, share the cost overruns through the public-private partnership projects under the enhanced financial arrangements.

33. PSHA advised that the Administration's aim of introducing the enhanced financial arrangements for WKCD was to facilitate the HOR developments in the district by WKCDA through the public-private partnership approach with a view to generating income for the operation of arts and cultural facilities in the district, and this was not directly related to the funding application of IB.

34. Mr Gary FAN asked the Administration to provide a detailed breakdown of the estimated construction cost (i.e. \$1,599.8 million) for the underground road in Zone 2 of IB, including the estimated costs for water supply, drainage, electrical and mechanical works and fire services installation works. The Administration undertook to provide the information requested by Mr FAN after the meeting.

(Post-meeting note: The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC278/18-19\(01\)](#) on 19 August 2019.)

35. Mr Tony TSE enquired whether the Administration was only responsible for the construction cost of IB and whether the income generated after the construction of IB would go to the Treasury. PM(HAB) confirmed that the Administration was only responsible for the construction cost of IB while WKCDA would be responsible for the expenditures for the operation, repair and maintenance of IB.

Financial situation and utilization rates of facilities in the West Kowloon Cultural District

36. Ms Claudia MO noted that WKCDA was facing operating deficits and required extra capital to construct the third batch of arts and cultural facilities. She enquired how WKCDA could break even. In response, PSHA responded that according to the initial planning, most of the retail/dining/entertainment ("RDE") facilities in WKCD could start operation in 2020 so that WKCDA could make use of the income generated from the facilities to meet the operating expenses. However, owing to the works delay related to the Hong Kong section of XRL, the IB project had to be postponed accordingly. Nevertheless, the Administration hoped that the IB project could be completed as soon as possible so as not to affect the work progress of the topside facilities (including RDE facilities) and aggravate the operating deficit problem of WKCDA.

37. Ms Claudia MO was concerned about the media report on the low utilization rate of only 31% for the Grand Theatre of the Xiqu Centre since its opening, and the high rental level of the Xiqu Centre as commented by some theatre troupes. PSHA replied that according to the response of WKCDA to the media report, the utilization rate of a venue did not only take performance days into account, but also included the time required for stage rehearsals of theatre troupes, move-in and move-out arrangements, and internal enhancement works. Ms MO requested the Administration to provide the response of WKCDA in respect of the media report concerned.

(*Post-meeting note:* The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC278/18-19\(01\)](#) on 19 August 2019.)

[At 3:26 pm, the Chairman invited members who intended to propose motions pursuant to paragraph 32A of the Public Works Subcommittee Procedure ("PWSCP") to propose their motions in written form as soon as possible.]

[At 3:33 pm, the Chairman directed that each of the members waiting to ask questions would be allowed to raise questions for once, and then the "question time" would come to a close.]

Voting on PWSC(2018-19)46

38. There were no further questions from members on the item. The Chairman said that at the last meeting on 8 May, some members had requested that the three projects under [PWSC\(2018-19\)46](#) be voted on separately.

175BF – Relocation of supporting operational facilities of Tsim Sha Tsui Fire Station Complex, Fire Services Club and other Fire Services accommodations to To Wah Road, Kowloon

39. The Chairman put 175BF to vote first. At the request of members, the Chairman ordered a division. The division bell rang for five minutes. Twenty-nine members voted for the project, and no member voted against it. Three members abstained from voting. The votes of individual members were as follows:

For:

Mr Charles Peter MOK (Deputy Chairman)	Mr Abraham SHEK
Mr Tommy CHEUNG	Mr CHAN Hak-kan
Dr Priscilla LEUNG	Ms Claudia MO
Mr Michael TIEN	Mr MA Fung-kwok
Mr CHAN Chi-chuen	Mr CHAN Han-pan
Mr LEUNG Che-cheung	Ms Alice MAK
Dr KWOK Ka-ki	Dr Fernando CHEUNG
Mr Alvin YEUNG	Dr Junius HO
Mr HO Kai-ming	Mr Holden CHOW
Mr Wilson OR	Mr CHEUNG Kwok-kwan
Mr LUK Chung-hung	Mr LAU Kwok-fan
Dr CHENG Chung-tai	Mr Jeremy TAM
Mr Gary FAN	Mr AU Nok-hin

Mr Vincent CHENG
Ms CHAN Hoi-yan
(29 members)

Mr Tony TSE

Against:
(0 member)

Abstained:
Mr WU Chi-wai
Mr KWONG Chun-yu
(3 members)

Dr Helena WONG

40. The Chairman declared that the project was endorsed by the Subcommittee.

754CL – Infrastructure Works for West Kowloon Cultural District, phase 1

41. The Chairman then put 754CL to vote. At the request of members, the Chairman ordered a division. The division bell rang for five minutes. Twenty members voted for the project, and 10 members voted against it. Two members abstained from voting. The votes of individual members were as follows:

For:

Mr Abraham SHEK
Mr CHAN Hak-kan
Mr Michael TIEN
Mr CHAN Han-pan
Ms Alice MAK
Dr Junius HO
Mr Holden CHOW
Mr CHEUNG Kwok-kwan
Mr LAU Kwok-fan
Mr Vincent CHENG
(20 members)

Mr Tommy CHEUNG
Dr Priscilla LEUNG
Mr MA Fung-kwok
Mr LEUNG Che-cheung
Dr Helena WONG
Mr HO Kai-ming
Mr Wilson OR
Mr LUK Chung-hung
Mr KWONG Chun-yu
Ms CHAN Hoi-yan

Against:

Mr Charles Peter MOK (Deputy Chairman)
Dr KWOK Ka-ki
Mr Alvin YEUNG
Mr Jeremy TAM
Mr AU Nok-hin
(10 members)

Ms Claudia MO
Dr Fernando CHEUNG
Mr CHU Hoi-dick
Mr Gary FAN
Mr Tony TSE

Abstained:

Mr CHAN Chi-chuen
(2 members)

Dr CHENG Chung-tai

42. The Chairman declared that the project was endorsed by the Subcommittee.

763CL – Integrated Basement for West Kowloon Cultural District – remaining works

43. Pursuant to paragraph 40A of PWSCP, a member moved without notice that in the event of further divisions being claimed in respect of any motions or questions under the same agenda item, the Subcommittee did proceed to each of such divisions after the division bell had been rung for one minute. No member opposed the motion.

44. The Chairman then put 763CL to vote. At the request of members, the Chairman ordered a division. The division bell rang for one minute. Twenty-one members voted for this project, and 11 members voted against it. No member abstained from voting. The votes of individual members were as follows:

For:

Mr Abraham SHEK
Mr CHAN Hak-kan
Mr Michael TIEN
Mr CHAN Han-pan
Ms Alice MAK
Dr Junius HO
Mr Holden CHOW
Mr CHEUNG Kwok-kwan
Mr LAU Kwok-fan
Mr Vincent CHENG
Ms CHAN Hoi-yan
(21 members)

Mr Tommy CHEUNG
Dr Priscilla LEUNG
Mr MA Fung-kwok
Mr LEUNG Che-cheung
Dr Helena WONG
Mr HO Kai-ming
Mr Wilson OR
Mr LUK Chung-hung
Mr KWONG Chun-yu
Mr Tony TSE

Against:

Mr Charles Peter MOK (Deputy Chairman)
Mr CHAN Chi-chuen
Dr Fernando CHEUNG
Mr CHU Hoi-dick
Mr Jeremy TAM
Mr AU Nok-hin
(11 members)

Ms Claudia MO
Dr KWOK Ka-ki
Mr Alvin YEUNG
Dr CHENG Chung-tai
Mr Gary FAN

Abstained:
(0 member)

45. The Chairman declared that the project was endorsed by the Subcommittee.

46. The Chairman indicated that at the last meeting on 8 May, Mr Gary FAN and Dr Helena WONG had already requested that the three projects under [PWSC\(2018-19\)46](#) be voted on separately at the relevant FC meeting.

[At 4:01 pm, the Chairman announced that the meeting be suspended till 4:05 pm.]

[At 4:05 pm, the Chairman announced that the meeting be resumed.]

Head 709 – Waterworks

PWSC(2019-20)2 357WF Design and construction for first stage of desalination plant at Tseung Kwan O

47. The Chairman advised that the proposal, i.e. [PWSC\(2019-20\)2](#), sought to upgrade 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 desalination plant in Tseung Kwan O ("proposed desalination plant"). The Government consulted the Panel on Development on the proposed works on 24 April 2018. Panel members supported the submission of the funding proposal to the Subcommittee for consideration. A report on the gist of the Panel's discussion was tabled at the meeting.

Cost of works for the first stage of the proposed desalination plant at Tseung Kwan O

48. Mr CHAN Chi-chuen noted that while the cost of the proposed works was estimated to be \$9,077.5 million according to the discussion paper submitted to the Panel on Development by the Administration in April 2018 (i.e. [LC Paper No. CB\(1\)825/17-18\(04\)](#)), it was currently estimated to be \$7,727.5 million. Given that the Administration had indicated its plan to take forward the proposed works by means of a Design-Build-Operate ("DBO") contract, and had invited tenders, Mr CHAN asked whether the Administration had lowered the estimated cost of works in light of the tender

prices, and whether it would anticipate any cost overruns on the proposed works.

49. Director of Water Supplies ("DWS") responded that, in order to meet the tight programme and enable early commencement of the proposed works, the Administration invited tenders in May 2018. The tendering contractors were four pre-qualified contractors. Based on the tender prices received, the Administration considered that the estimated cost of works could be lowered to \$7,727.5 million.

50. Mr Jeremy TAM asked why a multiplier of 1.6 was applied to the average Master Pay Scale salary point to calculate the staffing cost under the item "resident site staff costs" in Enclosure 2 to PWSC(2019-20)2.

51. Chief Engineer (Consultants Management), Water Supplies Department ("CE(CM)/WSD") advised that the expenditure on the salaries and benefits of resident site staff was calculated according to the guidelines laid down in the relevant Financial Circular Memorandum issued by the Financial Services and the Treasury Bureau. In all the papers on public works projects, this expenditure item was calculated and listed in the same way.

Design-Build-Operate contract arrangement

52. While expressing support for the development of seawater desalination technology in Hong Kong, Dr Fernando CHEUNG was concerned about the problems arising from the DBO public-private partnership model. Citing Singapore as an example, he pointed out that the country had developed a desalination plant through public-private partnership under a "design, build, own and operate" model, but the group operating the desalination plant encountered major financial difficulties and even faced closure crisis, thus having a significant impact on the operation of the desalination plant. However, if the Government purchased too much fresh water from the contractor, it would also need to spend public money. Therefore, he found it more desirable for the Administration to operate the proposed desalination plant by itself. In addition, Dr CHEUNG asked whether profit control clauses had been included in the contract.

53. DWS advised that, unlike some overseas projects in which the contractor funded the construction of the desalination plant on its own and then recovered the construction costs by selling the produced fresh water to the local government, the construction of the proposed desalination plant would be fully funded by the Government, and the operating costs would be paid under the General Revenue Account, so there would not be any problem

arising from the public-private partnership model as the Member described. In addition, the DBO contract model could ensure that the contractor would design, build and operate the proposed desalination plant in the most cost-effective way, so as to avoid any significant increase in future operational and maintenance expenses due to the use of cheap materials or more energy-consuming equipment during the construction of the proposed desalination plant.

54. Dr KWOK Ka-ki asked whether the Administration had stipulated terms and conditions that would protect its interests in the contract for the proposed desalination plant, such as the establishment of a reward and penalty mechanism under which if the contractor's performance was unsatisfactory (e.g. the quality of the produced fresh water was sub-standard), the Administration could impose fines or even terminate the contract in accordance with the mechanism.

55. CE(CM)/WSD advised that the contract would provide for a rigorous mechanism requiring the contractor to monitor the water quality in real time during the desalination process. In addition, the Water Supplies Department ("WSD") would conduct sample tests on the quality of the produced fresh water. If it did not meet the quality standards, the Administration would not pay the contractor for the sub-standard fresh water. He pointed out that the contractor's performance would be monitored against different performance indicators, including water quality and environmental requirements. DWS added that if the proposed desalination plant failed to operate, the Government would not pay for the construction costs of the parts concerned, nor had to pay for operating costs.

56. Mr Tony TSE supported the Administration's development of desalination technology, and hoped that it would not neglect the quality of works just to meet the tight programme when constructing the proposed desalination plant. Mr TSE asked whether the Administration would pay a management fee to the contractor for the operation of the proposed desalination plant; if so, how the amount of the management fee would be determined; whether the amount concerned and the expenditure on water purchase had been included in the estimated additional annual recurrent expenditure on the proposed desalination plant; and whether the estimated additional annual recurrent expenditure of \$316 million could be adjusted downward. Dr Helena WONG, on the other hand, enquired about the specific items in the aforesaid additional annual recurrent expenditure.

57. DWS said that the commissioned consultant had already studied the time required to build desalination plants at various places, so as to set a timetable for the proposed works. Under the DBO contract, the

Administration would pay the contractor the operation fees during the operation period, including a fixed basic fee and a variable fee depending on the amount of fresh water produced as required by the Government. The estimated additional annual recurrent expenditure of \$316 million was calculated based on the designed water production capacity of the proposed desalination plant (i.e. 135 000 cubic metres ("cu m") per day). If the Government requested the contractor to produce less fresh water, the expenditure would be reduced accordingly. Deputy Secretary for Development (Works)2 ("DS(W)2/DEVB") advised that the expenditure included such operating expenses as staff remuneration and electricity tariff.

58. In response to Dr Helena WONG's enquiry about the regulatory framework and responsibilities related to the works, Assistant Director of Water Supplies (New Works) (Acting) said that the consulting engineering firm commissioned by WSD and the resident site staff would oversee the construction works undertaken by the contractor. DWS added that WSD personnel would also closely monitor the works, including conducting on-site inspections. If any problems were found, appropriate follow-up actions would be taken.

59. Mr WU Chi-wai requested the Administration to provide supplementary information on the calculation of the operation fees receivable in the future by the contractor under the DBO contract for the first stage of the proposed desalination plant. The Administration undertook to provide relevant information after the meeting.

(Post-meeting note: The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC230/18-19\(01\)](#) on 29 May 2019.)

60. Mr CHAN Chi-chuen expressed support for taking forward the proposed works with a view to providing a stable source of water for Hong Kong in the future. Citing Singapore as an example, he pointed out that it put great emphasis on the stable supply of fresh water, with a self-sufficiency rate of about 70%, and its desalination technology was rather advanced and even exportable. He asked whether the Administration would select an internationally renowned contractor with ample experience in desalination plant operation when evaluating tenders for the contract for the proposed desalination plant. He held that if the proposed desalination plant could be fully operational once completed, it would help the Administration familiarize itself with the operation of desalination plant and upgrade the technology in this regard, thereby enabling it to export the relevant technology in the long run. Mr CHAN and Dr Fernando CHEUNG asked whether a technology transfer clause would be set forth in the tender

document and the contract, requiring the contractor to transfer the relevant technology, including the reverse osmosis technology for seawater desalination, to the Government so as to facilitate future takeover of the operation of the proposed desalination plant.

61. DWS replied that all the four pre-qualified contractors from Spain, France and Israel had ample international experience in the construction and operation of desalination plants. Under the DBO contract arrangement for the proposed desalination plant, the contractor would be responsible for the operation and maintenance of the proposed desalination plant for the first 10 to 15 years, while WSD's professional and technical personnel would be engaged in the day-to-day operation and maintenance of the proposed desalination plant so as to gain technological experience and knowledge, particularly in the use of reverse osmosis technology.

62. DS(W)2/DEVB advised that the purpose of building the proposed desalination plant was to develop a strategic water resource to cope with climate change. The fresh water production upon completion of the proposed desalination plant would not necessarily reach the designed capacity. The preliminarily estimated average water production capacity was about 40 000 to 50 000 cu m per day, or about 30% to 40% of the designed water production capacity. The arrangement involved two considerations: firstly, WSD personnel should be given sufficient time to familiarize themselves with the operation of the proposed desalination plant; secondly, sharing the same water distribution network with the Pak Kong Water Treatment Works ("PKWTW"), the proposed desalination plant could, upon commissioning, alleviate the pressure on PKWTW's water production, which was approaching the upper limit of its capacity. He supplemented that the water production capacity of the proposed desalination plant would depend on the actual situation. For example, in the case of abnormal dry weather or during the suspension of Dongjiang water supply for maintenance in December every year, the proposed desalination plant would raise the water production capacity to meet the demand.

63. Pointing out that Singapore used solar energy to power desalination plants, Ms Claudia MO asked whether the proposed desalination plant would be powered by renewable energy. Dr CHENG Chung-tai and Mr AU Nok-hin, on the other hand, enquired about the progress and details of the discussion between the Administration and the Hong Kong and China Gas Company Limited about utilization of the landfill gas generated at the South East New Territories Landfill to power the proposed desalination plant, and whether the existing ancilliary facilities at the landfill could tie in with the development of the proposed desalination plant. Dr CHENG further asked about the maintenance cost of the membrane used in the reverse

osmosis technology adopted for the proposed desalination plant, and whether the quality of the fresh water produced in the future should be brought to a drinkable level.

64. DWS said that, in order to encourage the contractor to use renewable energy, the Administration would rate the use of renewable energy by tenderers during the tender assessment process. The Administration allowed them to choose the most appropriate renewable energy to suit the operation of the proposed desalination plant. The electricity generated by the solar panels installed at the proposed desalination plant would not be sufficient to meet the total electricity needed for the operation of the proposed desalination plant. As regards the maintenance cost of the membrane used in the reverse osmosis technology, it would depend on the design and technology adopted by the contractor. DS(W)2/DEVB advised that the proposed desalination plant would be connected to the Tseung Kwan O ("TKO") Fresh Water Primary Service Reservoir. The relevant mainlaying works were underway. The Administration would ensure that the fresh water produced by the proposed desalination plant would comply with Hong Kong's fresh water quality standards.

Water production capacity and production cost

65. Mr LAU Kwok-fan and Mr KWONG Chun-yu were concerned about whether the water production capacity of the proposed desalination plant was sufficient to cope with the possible extreme dry weather brought about by climate change. DS(W)2/DEVB advised that the water production capacity in the first stage of the proposed desalination plant could reach 135 000 cu m per day, accounting for about 5% of Hong Kong's total fresh water consumption. Upon completion of the second-stage works, the water production capacity could be raised to 270 000 cu m per day, i.e. about 10% of Hong Kong's total fresh water consumption. He pointed out that, according to Hong Kong's data for the past 20 to 30 years, 2011 was the most water-scarce year, with 1 487 millimetres ("mm") of rainfall and 103 million cu m of water collected in the local catchment areas throughout the year. Rather, in the context of the past century or so, 1963 was the most water-scarce year, with 901 mm of rainfall throughout the year. Based on the aforesaid circumstances, it was estimated that even if Hong Kong encountered a once-in-a-century extreme dry weather, the local catchment areas could collect 50 million to 60 million cu m of water, which, together with Dongjiang water, reservoir water and about 50 million cu m of annual water production in the first stage of the proposed desalination plant, should be able to cope with possible extreme dry weather.

66. Mr AU Nok-hin, Ms Claudia MO, Mr CHAN Chi-chuen, Dr Helena WONG and Dr KWOK Ka-ki expressed concern about the unit water production cost (about \$13 per cu m at 2018 price level) of the proposed desalination plant. Ms MO welcomed the development of desalination technology in Hong Kong. Referring to WSD officers' proposition in the early years that the cost of desalination might gradually decline as technology matured, she asked why the current cost of fresh water production was higher than the cost of \$10 to \$11 estimated a few years ago. On the other hand, Mr CHAN asked whether the Administration had specified in the tender document a ceiling on the cost of production per cu m of fresh water. For example, it should not exceed \$13 or the cost increase should not surpass inflation.

67. DS(W)2/DEVB replied that the unit cost of water production with desalination technology had decreased from nearly \$20 in the past to about \$12 to \$13 in recent years, and remained at this level without any upward adjustment in line with inflation. However, due to high energy consumption in the use of desalination technology, i.e. currently about 4 kilowatt hours for the production of every cu m of fresh water, the electricity tariff accounted for a rather large proportion of the production cost. Seawater quality would also affect the cost. Poor water quality would push up the cost prior to reverse osmosis. DWS advised that the DBO contract for the proposed desalination plant would be awarded to the tenderer who scored the highest in the comprehensive assessment of technical and price information, but no cap would be imposed on the operating expenses.

68. Noting that electricity tariff accounted for about one third of the water production cost, Dr Helena WONG requested the Administration to provide supplementary information on the method to calculate the unit cost per cu m of fresh water produced, as well as the mechanism for water price adjustments in response to such factors as electricity tariff adjustments and inflationary changes, as prescribed under the DBO contract for the first stage of the proposed desalination plant. Dr KWOK Ka-ki and Mr CHAN Chi-chuen also made similar requests. The Administration undertook to provide written supplementary information after the meeting.

(Post-meeting note: The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC230/18-19\(01\)](#) on 29 May 2019)

69. Both Mr AU Nok-hin and Dr KWOK Ka-ki expressed support for the concept and practice of desalination. They asked how the costs of desalination compared between Hong Kong and other regions, such as Singapore and Saudi Arabia, and what caused the cost differences. Mr AU

cited footnote 3 in LC Paper No. PWSC(2019-20)2 as saying that the unit cost for production of fresh water using desalination technology was affected by various factors, such as energy cost, seawater quality and temperature, intake arrangement, environmental measures and financing details. He sought explanation as to how the aforesaid factors would affect the cost of desalination in Hong Kong.

70. DS(W)2/DEVB responded that the unit cost for production of fresh water by desalination varied widely in different places, ranging from \$3 to \$50 per cu m. The unit water production cost of the proposed desalination plant would be about \$13, which was in the middle range. The causes for cost variation in different places included:

- (a) seawater quality and salt concentration: poor water quality and high salt concentration would entail more pre-treatment and consume more energy for reverse osmosis, thus increasing the cost;
- (b) quality of the produced fresh water: the fresh water produced by the proposed desalination plant should reach a drinkable level, so the cost would be much higher than that for the production of non-drinkable fresh water; and
- (c) electricity tariff level: the local electricity tariff level would affect the water production cost. It was estimated that the average electricity cost for fresh water production in Hong Kong using the reverse osmosis technology for desalination would be about \$3 to \$4 per cu m.

71. Pointing out that the unit water production cost per cu m of the proposed desalination plant was higher than the cost for buying Dongjiang water (i.e. \$10.1 per cu m), Mr AU Nok-hin asked whether the water production cost of the proposed desalination plant would be comparable to that of Dongjiang water after deducting the portion of capital investment. In addition, he cited LC Paper No. CB(1)832/18-19(01) as saying that the cost of depreciation associated with the capital investment of the waterworks facilities was part of the production cost of water, and asked how many years the proposed desalination plant was expected to operate, and whether a longer operational period would mean a lower cost of depreciation, so that its water production cost could be reduced to a level comparable to the purchase of Dongjiang water in the long run.

72. DS(W)2/DEVB said that, according to the Administration's current estimate, about \$3 to \$4 of the unit water production cost of the proposed

desalination plant was the cost of depreciation associated with the capital investment; the anticipated life span of the civil engineering project for the desalination plant was about 50 years; while that of the electrical and mechanical engineering project was about 25 years. DS(W)2/DEVB emphasized that as the purpose of building the proposed desalination plant was to provide a strategic water resource to cope with climate change, rather than replace the water supply from Dongjiang water, it was inappropriate to deduct the cost of depreciation associated with the capital investment in the cost comparison between the two.

73. Mr Holden CHOW asked whether a price adjustment mechanism would be set up to stabilize the price of the fresh water produced by the proposed desalination plant. DS(W)2/DEVB advised that, based on various factors, including energy cost and seawater quality, the unit cost per cu m of fresh water produced by the proposed desalination plant was projected to be about \$13, subject to adjustment in light of the electricity tariff and inflation.

Development plan for the second stage of the desalination plant

74. Mr Jeremy TAM enquired about the number of desalination plants in Hong Kong, and asked whether other desalination plants had been set up in the past. DS(W)2/DEVB advised that the proposed desalination plant, when completed, would be WSD's only desalination plant, adopting relatively advanced desalination technology. In the past, WSD had a desalination plant in Lok On Pai, Tuen Mun, using multi-stage flash distillation technology. It was shut down in 1982 due to high fuel price and was subsequently dismantled in 1992.

75. Mr KWONG Chun-yu considered it insufficient to have only one desalination plant in Hong Kong. Both he and Dr Helena WONG asked about the plan and timetable for the commencement of the second-stage works in relation to the proposed desalination plant. Mr Jeremy TAM also asked about the estimated cost of works for the second stage of the proposed desalination plant. DS(W)2/DEVB said that the Administration had no plan to commence the second-stage works for the proposed desalination plant, so it was difficult to provide a timetable for that, and it had not estimated the relevant cost of works either.

76. Expressing support for the proposed works, Mr Gary FAN considered that the Administration should simultaneously commence the first-stage and second-stage works for the proposed desalination plant in order to reach the ultimate water production capacity of 270 000 cu m per day. In addition, he pointed out that simultaneous commencement of both stages of works could

lead to economies of scale, hence further reduction of the water production cost. He criticized the Administration for refusing to take Members' views on board, and asked whether the same desalination technology was adopted for the first and second stages of the proposed desalination plant.

77. DS(W)2/DEVB advised that, upon completion of the first-stage construction of the proposed desalination plant, the water production could reach a capacity of 135 000 cu m per day, or about 50 million cu m per year, as a water source to address climate change, so it was unnecessary to commence the second-stage works at this moment. He pointed out that reverse osmosis technology would be adopted for both first and second stages of the proposed desalination plant, but with the development of reverse osmosis technology, the membrane and the energy recovery method used might vary.

78. Dr Helena WONG asked whether the DBO development model would still be used if the Administration commenced the second-stage works of the proposed desalination plant, or it would be operated by WSD itself. DS(W)2/DEVB replied that if there was a need in future to commence the second-stage works of the proposed desalination plant, the Administration would consider again which contract arrangement was more desirable.

79. Mr Jeremy TAM asked whether the development of the proposed desalination plant would restrict the land use in the vicinity of the site. DS(W)2/DEVB and DWS advised that the site earmarked for the first and second stages of the proposed desalination plant had a total area of eight hectares, of which about 5.6 hectares were allocated for the first-stage development involving mainly the construction of first-stage desalination facilities, the administration building and other common facilities for both stages. According to the current design, the development of the proposed desalination plant would not affect the use of surrounding land.

80. Ms Claudia MO was concerned about the slow progress of the proposed desalination plant project. DS(W)2/DEVB responded that the Administration upgraded 357WF to Category B in September 2014, and upgraded part of the project to Category A in October 2017 to lay about 10 kilometres of fresh water mains for connecting the proposed desalination plant to the existing TKO Fresh Water Primary Service Reservoir. The main laying works would take some time and were expected to complete in 2022. By then, the proposed desalination plant would be simultaneously completed.

Policy on fresh water supply and Dongjiang water supply agreements

81. Mr Jeremy TAM, Dr Helena WONG and Mr KWONG Chun-yu asked whether it would be possible to reduce the purchase of Dongjiang water and whether the price at which Hong Kong purchased Dongjiang water under the "package deal lump sum" approach could be lowered upon commencement of operation of the proposed desalination plant. Meanwhile, Mr CHAN Chi-chuen asked whether the Administration had stipulated that when the cost of fresh water produced through desalination dropped to a certain level, it could replace the Dongjiang water supply.

82. DS(W)2/DEVB reiterated that the proposed desalination plant was positioned as a means to address climate change, whereas the annual supply ceiling of Dongjiang water aimed at 99% reliability of water supply in Hong Kong. Reducing the import of Dongjiang water after commencement of operation of the proposed desalination plant would offset the function of the plant in addressing climate change. He added that the current purchase of Dongjiang water was more cost-effective than water production through desalination, but the Administration did not rule out the need to build more desalination plants. The future ratio between Dongjiang water and fresh water produced through desalination would depend on such factors as costs, water demand and the progress in saving water and exploring other water sources.

83. Mr LAU Kwok-fan said that the Democratic Alliance for the Betterment and Progress of Hong Kong supported the proposed works. Given that Hong Kong signed a Dongjiang water supply agreement with the Guangdong authorities every three years, and the current agreement would expire in 2020, both Mr LAU and Mr Gary FAN asked whether the Administration would include the water production capacity of the proposed desalination plant as a factor for consideration when negotiating a new water supply agreement with the Guangdong authorities, so as to enhance the bargaining power of the Hong Kong Government. Mr FAN further believed that the positioning of the proposed desalination plant should not be limited to addressing climate change, but be expanded to increasing the self-sufficiency ratio of fresh water. He also pointed out that the current Dongjiang water supply agreement had an annual water supply ceiling of 820 million cu m, but an average of 14% of the water supply had not been fully used in the past seven years, resulting in a waste of up to \$3.76 billion.

84. DS(W)2/DEVB advised that the Administration would negotiate a new Dongjiang water supply agreement with the Guangdong authorities in 2020. By then, the proposed desalination plant would not be completed

yet, so it might not necessarily be included in the considerations during the negotiation of the agreement.

85. Mr Gary FAN cited the Administration's remark made at the meeting of the Panel on Development on 24 April 2018 that a review on the payment approach was underway and expected to be completed before 2020 when the existing Dongjiang water supply agreement would be due to expire. He asked about the work progress of the working group responsible for the review; in the course of negotiating the agreement, whether the Guangdong authorities were aware of the intended construction of the proposed desalination plant in Hong Kong; and whether they had discussed different possibilities of changing the payment approach, such as abolishing the "package deal lump sum" approach and substituting it with a reimbursement approach under which water was purchased according to the actual water consumption. DS(W)2/DEVB advised that the aforesaid working group had held several meetings, still aiming at completing the review before the expiry of the existing water supply agreement, and the Guangdong authorities were all along aware that the proposed desalination plant would be built in Hong Kong and positioned to address climate change.

86. Mr AU Nok-hin enquired about the Administration's long term policy on fresh water supply, and the proportion of the water production capacity of the proposed desalination plant in Hong Kong's total fresh water supply after its commissioning. Mr WU Chi-wai asked, in view of the rising price of Dongjiang water, under what circumstances the Administration would consider taking forward the second-stage plan for the desalination plant, with a view to stabilizing fresh water supply in Hong Kong and raising Hong Kong's bargaining power in the purchase of Dongjiang water.

87. Dr Helena WONG and Mr KWONG Chun-yu urged the Administration to properly conduct long-term planning for water resources, so as to reduce reliance on Dongjiang water and increase the proportion of locally produced fresh water.

88. DS(W)2/DEVB advised that the price of Dongjiang water was adjusted for changes in the RMB exchange rate, inflation rates of the two places and operating costs. In response to the changes in the RMB exchange rate in recent years, the last price increase for Dongjiang water was only 0.35% per year. In the long run, the price of Dongjiang water might not necessarily be higher than that of the fresh water produced by the desalination plant. As regards whether to initiate the second-stage plan for the desalination plant, the Administration would closely monitor the supply and demand situation of fresh water in Hong Kong, as well as such factors as the energy consumption and environmental impact of the production of fresh

water by desalination. The Administration anticipated that, as a result of population growth in the next decade, water consumption in Hong Kong might increase by about 10%. Meanwhile, the Administration had set a water saving target of reducing water consumption per capita by 10%, which might offset the increased demand for water due to population growth.

89. Mr Jeremy TAM asked whether the proposed desalination plant would maintain the water production of 135 000 cu m regardless of whether there was extreme dry weather, and how the Administration would deal with the oversupply, if any, of fresh water produced by the proposed desalination plant and Dongjiang water.

90. DS(W)2/DEVB advised that, upon commissioning of the proposed desalination plant, the fresh water production was preliminarily estimated to be about 40 000 to 50 000 cu m on average, i.e. about 30% to 40% of the designed water production capacity. This would enable the WSD staff to gradually familiarize themselves with the operation of the proposed desalination plant on the one hand, and relieve the pressure on PKWTW's water supply on the other. During dry years and at the end of each year when Dongjiang Water was suspended for maintenance purposes, the water production capacity of the proposed desalination plant would be increased accordingly. The fresh water produced by the proposed desalination plant and PKWTW would be simultaneously delivered to the existing TKO Fresh Water Primary Service Reservoir to serve about 1.4 million people in Hong Kong Island East, Kowloon East and TKO. He further advised that the Administration would inform the Guangdong authorities on a monthly basis of the amount of Dongjiang water to be supplied to Hong Kong for the next month, based on the storage position of impounding reservoirs and rainfall forecast, so that there would be no wastage.

91. Mr Gary FAN asked about the water supply arrangements for the households in Hong Kong Island East, Kowloon East and TKO, and how the production capacity of the proposed desalination plant would be sufficient to meet the fresh water demand of the 1.4 million population in the area, i.e. 20% of the 7.4 million population in Hong Kong.

92. DS(W)2/DEVB said that the fresh water supply for Hong Kong Island East, Kowloon East and TKO was currently provided by PKWTW. Sharing the same supply zone as PKWTW, the proposed desalination plant would, upon commissioning, be able to share the water supply burden on PKWTW. Currently, PKWTW's production was some 500 000 cu m per day, accounting for about 20% of Hong Kong's daily water usage. With a volume of 150 000 cu m, the TKO Fresh Water Primary Service Reservoir was large enough to accommodate the water produced by the two water

treatment/desalination plants. DWS added that the water supply pipelines of the TKO Fresh Water Primary Service Reservoir were linked to TKO, Kowloon East and Hong Kong Island East.

93. Mr CHU Hoi-dick asked how the proposed desalination plant compared with other desalination plants in the international arena in terms of scale, and about the overall development of desalination strategy for the Guangdong-Hong Kong-Macao Greater Bay Area ("Greater Bay Area"). He suggested that the Administration should be actively engaged in developing the regional water supply strategy for the Greater Bay Area. Mr KWONG Chun-yu shared similar views.

94. DS(W)2/DEVB advised that the annual water production capacity of the proposed desalination plant could reach 50 million cu m, making it a medium-sized desalination plant by international standards. The Administration did not have information on the implementation of desalination schemes in other cities of the Greater Bay Area. The Administration was given to understand that the Guangdong Province was implementing the West-to-East Water Diversion Project to divert the water resources of Xijiang to the eastern region, so as to ease the demand pressure on Dongjiang water.

Environmental impact assessment

95. Dr Helena WONG asked whether the current design of the submarine outfall and intake pipelines of the proposed desalination plant could ensure that the fresh water produced was of good quality and the nearby marine ecology would not be affected.

96. DWS advised that the lengths of the intake and outfall pipelines would be 250 m and 350 m respectively, and different in both angles and directions. The computer model used in the consultancy study showed that the discharged brine would not go directly into the intake pipeline, but would instead be promptly diluted in the sea through a specially designed diffuser, and the impact on nearby water quality would be of acceptable levels. The computer model had taken into account the different water flow directions in the four seasons. During the construction and operation of the proposed desalination plant, an independent environmental consultant would monitor any changes in the quality of nearby sea water.

97. Dr Helena WONG was concerned about the underground pollution caused by the TKO landfill and the impact of the landfill gas on the quality of the water supply from the desalination plant, and whether risk assessments had been made on the landfill gas.

98. DWS advised that, in the course of designing the proposed desalination plant, the consultant had conducted an in-depth study on water quality, particularly at the intake point, to ensure that the fresh water produced by the proposed desalination plant would be fully compliant with the fresh water quality standards of Hong Kong. CE(CM)/WSD added that the environmental impact assessment for the project included also a detailed risk assessment on landfill gas. The mitigation measures required of the contractor during the construction and operation period would be specified in detail in the contract.

99. Mr CHU Hoi-dick suggested that safety standards against extreme weather should be incorporated into the design of the desalination plant. DWS advised that, when vetting and approving the design of the proposed desalination plant, the Administration would require that it meet the latest design standards set for extreme weather.

100. There being no further questions from members on the item, the Chairman put PWSC(2019-20)2 to vote. At the request of members, the Chairman ordered a division. Twenty-eight members voted for the proposal, no member voted against and no member abstained from voting. The votes of individual members were as follows:

For:

Mr Charles Peter MOK (Deputy Chairman)	Mr Abraham SHEK
Mr Tommy CHEUNG	Ms Starry LEE
Ms Claudia MO	Mr Michael TIEN
Mr MA Fung-kiok	Mr CHAN Chi-chuen
Mr CHAN Han-pan	Mr LEUNG Che-cheung
Ms Alice MAK	Dr Fernando CHEUNG
Dr Helena WONG	Mr Alvin YEUNG
Mr CHU Hoi-dick	Mr HO Kai-ming
Mr Holden CHOW	Mr CHEUNG Kwok-kwan
Mr LUK Chung-hung	Mr LAU Kwok-fan
Dr CHENG Chung-tai	Mr KWONG Chun-yu
Mr Jeremy TAM	Mr Gary FAN
Mr AU Nok-hin	Mr Vincent CHENG
Mr Tony TSE	Ms CHAN Hoi-yan

(28 members)

Against:

(0 member)

Abstained:

(0 member)

101. The Chairman declared that the item was endorsed by the Subcommittee. The Chairman consulted members on whether the item would require separate voting at the relevant FC meeting. No member made such a request.

Head 705 – Civil Engineering

PWSC(2019-20)1 50CG Provision of an Additional District Cooling System at the Kai Tak Development

102. The Chairman advised that the proposal, i.e. [PWSC\(2019-20\)1](#), sought to upgrade 50CG to Category A at an estimated cost of \$4,269.3 million in MOD prices for the provision of an additional District Cooling System ("DCS") at the Kai Tak Development ("KTD"). The Administration consulted the Panel on Development on the proposed works on 26 February 2019, and a majority of members did not oppose the Administration's submission of this funding proposal to the Subcommittee for consideration. A report on the gist of the Panel's discussion was tabled at the meeting.

Capital cost and recovery of investment cost

103. Mr CHAN Chi-chuen enquired whether the Administration would provide another DCS at the KTD in future and seek funding approval again from LegCo for such a purpose. Mr CHAN also queried why funding had to be allocated under the proposed project for the provision of connection facilities at the Kai Tak Sports Park ("KTSP") to the new DCS, and enquired about the proportion of capital cost pertaining to KTSP and whether the Administration would seek a recovery of the capital cost concerned from the operator of KTSP.

104. Under Secretary for the Environment ("USEN") responded that the cooling capacity of the existing DCS was designed during the initial development of KTD in 2008. Since then, the Electrical and Mechanical Services Department ("EMSD") had been monitoring closely new developments, and decided in 2017 that the existing DCS would not be able to meet the growth in projected cooling demand of user buildings including the New Acute Hospital ("NAH"), the addition of total commercial floor area of about 400 000 sq m arising from the increase in development intensity of KTD as announced in the 2017 Policy Address, and the KTSP. At present, the Administration was of the view that the proposed additional DCS was sufficient to cope with the existing and the planned developments at the KTD, and under the circumstances, it was unnecessary to provide another new DCS

at the KTD. He pointed out that 44% of the cooling capacity of the proposed additional DCS would serve the NAH, over 30% of the cooling capacity would serve the demand from the addition of total commercial floor area of about 400 000 sq m, while the remaining approximately 25% of the cooling capacity would serve the KTSP.

105. Deputy Director of Electrical and Mechanical Services (Regulatory Services) added that the capital cost of the proposed additional DCS was calculated on the basis of the overall construction of the system and would not be broken down on the basis of individual user buildings. In terms of the air-conditioned floor area that would be served by the additional DCS, KTSP would account for about one-fourth of the total area. In respect of the charges, under the District Cooling Services Ordinance (Cap. 624) ("the Ordinance"), the users concerned would be charged according to the cooling capacity and the cooling energy consumption.

106. In regard to the existing DCS, Mr Jeremy TAM enquired about the comparison between the Administration's estimated annual recurrent costs provided during funding application to LegCo and the actual recurrent costs on an annual basis since operation, and asked about the number of adjustments and the range of each adjustment to the charges and fees collected by the Administration according to the Ordinance for the provision of district cooling services in the past, as well as the electricity tariff levels for the corresponding periods.

107. USEN advised that as provided in the Ordinance, the level of charges was adjusted in accordance with price indices and electricity tariff rate. Over the past few years, the level of charges concerned had been adjusted annually according to the formula under the above-mentioned mechanism without being subject to approval from LegCo for each adjustment. The Administration would conduct an overall review five years after the implementation of the DCS project (i.e. end of 2019). The Administration would provide the supplementary information concerned after the meeting.

(Post-meeting note: The Administration's supplementary information was circulated to members vide [LC Paper No. PWSC214/18-19\(01\)](#) on 17 May 2019.)

108. The Chairman said that the Subcommittee would continue to discuss this item at the next meeting. The meeting ended at 6:30 pm.