

立法會
Legislative Council

LC Paper No. PWSC128/20-21
(These minutes have been seen
by the Administration)

Ref: CB1/F/2/1(15)B

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

**Minutes of the 15th meeting
held in Conference Room 1 of the Legislative Council Complex
on Wednesday, 28 April 2021, at 8:30 am**

Members present:

Hon Tony TSE Wai-chuen, BBS, JP (Chairman)
Ir Dr Hon LO Wai-kwok, SBS, MH, JP (Deputy Chairman)
Hon Tommy CHEUNG Yu-yan, GBS, JP
Dr Hon Priscilla LEUNG Mei-fun, SBS, JP
Hon Michael TIEN Puk-sun, BBS, JP
Hon Frankie YICK Chi-ming, SBS, JP
Hon MA Fung-kwok, GBS, JP
Hon CHAN Han-pan, BBS, JP
Hon LEUNG Che-cheung, SBS, MH, JP
Hon Alice MAK Mei-kuen, BBS, JP
Dr Hon Junius HO Kwan-yiu, JP
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 Vincent CHENG Wing-shun, MH, JP

Member absent:

Hon Abraham SHEK Lai-him, GBS, JP

Public officers attending:

Mr Howard LEE Man-sing	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)
Dr Samuel CHUI Ho-kwong, JP	Deputy Director of Environmental Protection (1)
Ms Margaret HSIA Mai-chi	Principal Assistant Secretary for Financial Services and the Treasury (Treasury) (Works)
Mr Johnny CHAN Chi-ho	Principal Assistant Secretary for Development (Works) ²
Ms Shirley LEUNG Cheuk-lam	Assistant Secretary for Development (Works Policies 2) ¹
Mr Ricky WONG Chi-pan, JP	Deputy Head of Civil Engineering Office (Port and Land) Civil Engineering and Development Department
Mr Francis LEE Man-chow	Project Team Leader (Pier Improvement) Civil Engineering and Development Department
Mr Patrick NG Hon-lai	Principal Transport Officer (New Territories) ¹ Transport Department

Mr Terence TSANG	Assistant Director of Environmental Protection (Environmental Assessment)
Mr LEE Chee-kwan	Principal Environmental Protection Officer (Assessment and Noise) Environmental Protection Department
Mr LUK Wai-hung, JP	Project Manager (Major Works) Highways Department
Mr Alex CHAN Choi-wai	Principal Project Coordinator (Environmental Projects) Highways Department
Mr CHEN Che-kong, JP	Assistant Director of Environmental Protection (Water Policy)
Ms Katherine KOH Kai-han	Principal Environmental Protection Officer (Sewerage Infrastructure) (Acting) Environmental Protection Department
Ms Alice PANG, JP	Director of Drainage Services
Ms Carol HO Ka-yee	Chief Engineer (Consultants Management) Drainage Services Department
Miss Winnie TSE Wing-yee	Deputy Secretary for Transport and Housing (Transport) ³
Ms Vivien LI Chim-wing	Principal Assistant Secretary for Transport and Housing (Transport) ²
Mr Michael HONG Wing-kit	Chief Civil Engineer (Public Works Programme) Transport and Housing Bureau
Mr KAN Chun-yuk	Chief Project Manager 303 (Acting) Architectural Services Department
Mr Chris LIU Chi-ho	Senior Project Manager 340 Architectural Services Department

Mr Frankie CHOU Wing-ping	Regional Highway Engineer (New Territories) Highways Department
Mr Joe LEUNG Bing-man	Chief Civil Engineer (2) (Acting) Housing Department
Mr Max WONG Chi-chung	Chief Architect (3) Housing Department
Mr Sherman YIP Shing-lam	Chief Architect (Development and Standards) Housing Department
Mr Eddie LEUNG Siu-kong	Assistant Commissioner (Task Force) Transport Department
Mr Eric WAN Pak-yan	Principal Transport Officer (New Territories) ² Transport Department

Clerk in attendance:

Mr Daniel SIN	Chief Council Secretary (1)6
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Staff in attendance:

Mr Keith WONG	Senior Council Secretary (1)2
Ms Mandy LI	Senior Council Secretary (1)6
Mr Patrick CHOI	Council Secretary (1)6
Ms Christina SHIU	Legislative Assistant (1)2
Ms Christy YAU	Legislative Assistant (1)8
Ms Clara LO	Legislative Assistant (1)9

Action

The Chairman advised that there were six papers for discussion on the agenda for the meeting. The first to third funding proposals were items carried over from the last meeting held on 21 April 2021, while the fourth to sixth proposals were new submissions from the Administration. The six funding proposals involved a total funding allocation of \$43,501.6 million. 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 705 — Civil Engineering

PWSC(2021-22)5 58TF Improvement works at Kau Sai Village Pier

59TF Improvement works at Lai Chi Chong Pier

2. The Chairman advised that the proposal (i.e. [PWSC\(2021-22\)5](#)) sought to upgrade 58TF and 59TF to Category A at the respective estimated costs of \$77.8 million and \$108.8 million in money-of-the-day ("MOD") prices. The Government consulted the Panel on Development on the two proposed projects on 23 March 2021. Members generally had no objection to the two funding proposals. A report on the gist of the Panel's discussion was tabled at the meeting.

3. Mr Holden CHOW enquired whether the Administration would adjust the frequency of the current ferry services in view of the increase in the number of pier users in the future after the reconstruction of the piers; if so, what the details were.

4. Principal Assistant Secretary for Development (Works)2 ("PAS(W)2/DEVB") responded that the proposed projects aimed at upgrading the structural safety of Kau Sai Village Pier ("KSV Pier") and Lai Chi Chong Pier ("LCC Pier") and improving their berthing conditions and facilities (such as provision of barrier-free facilities) to facilitate the public in accessing scenic spots and natural heritage in the countryside, thereby boosting the public's interest to visit there and increasing the number of pier users. Under the established mechanism, the Transport Department ("TD") might grant approval for ferry operators to increase the frequency of ferry services after considering such factors as increased service demand and number of pier users.

5. Principal Transport Officer (New Territories)1, Transport Department, said that LCC Pier was currently served by scheduled kaito ferry service, with two return trips on weekdays and three return trips on weekends and holidays. Following the discussion between TD and the relevant operators in view of the increased usage of kaito ferry service by members of the public visiting the countryside in the recent six months, more trips were provided by the kaito ferry service between Ma Liu Shui and Tap Mun (via Shum Chung and Lai Chi Chong) on Saturdays, Sundays and public holidays to meet passengers' needs.

6. The Chairman commented that after spending around \$200 million on reconstructing KSV Pier and LCC Pier and improving their facilities, the Administration should step up promotion and publicity to encourage the public to use those facilities. The Chairman was concerned whether contractors were attracted to participate in the tender exercises for the improvement works to ferry facilities at remote locations, whether the tender arrangement was competitive, and whether the invitation of tenders received enthusiastic response from contractors.

7. PAS(W)2/DEVB said that the Administration would follow up on the promotion work to boost the usage of the piers after the reconstruction. Such effort was illustrated by the establishment of the Committee on Piers, an inter-bureau and inter-departmental committee comprising representatives from the Tourism Commission and the Agriculture, Fisheries and Conservation Department. Apart from examining the projects under the Pier Improvement Programme ("PIP"), the Committee on Piers might also follow up on matters related to the utilization of piers. Regarding the tender exercises for the improvement works to the two piers in question, PAS(W)2/DEVB pointed out that 10-odd Group B contractors on the List of Approved Contractors for Public Works approved for carrying out port works were invited to participate in the tender. The Administration was implementing the first phase of PIP, which included the improvement to Pak Kok Pier on Lamma Island that commenced in 2020. Subject to the funding approval of the Finance Committee ("FC"), the improvement works to KSV Pier and LCC Pier would commence in 2021, while tenders would be invited in 2022 for another five pier improvement items. The tender arrangement was competitive as the contractors of the port works category on the aforesaid list were all equipped with the vessels, machineries and technicians required for carrying out the pier improvement works, while the Administration would also maintain communication with the sector.

Voting on PWSC(2021-22)5

8. There being no further questions from members on the item, the Chairman put [PWSC\(2021-22\)5](#) to vote.

9. The item was voted on and endorsed. The Chairman consulted members on whether the item would require separate voting at the relevant meeting of FC. No member made such a request.

Head 706 — Highways

PWSC(2021-22)6 766TH Retrofitting of noise barriers on Po Lam Road North

817TH Retrofitting of noise barriers on Po Ning Road

10. The Chairman advised that the proposal (i.e. [PWSC\(2021-22\)6](#)) sought to upgrade 766TH and 817TH to Category A at the respective estimated costs of \$376 million and \$241.7 million in MOD prices. The Government consulted the Panel on Environmental Affairs on the two projects on 22 February 2021. Members had no objection to the submission of the two funding proposals to the Subcommittee for consideration. A report on the gist of the Panel's discussion was tabled at the meeting.

Cost-effectiveness of the proposed projects

11. Mr Holden CHOW said that he had no objection to the proposed projects. He noted that within the scopes of the two projects of retrofitting noise barriers on Po Lam Road North and Po Ning Road, vertical noise barriers or cantilevered noise barriers would be used at some road sections. He sought explanation on the differences between the two types of noise barriers in terms of construction cost and noise reduction performance and the factors considered when deciding on using different types of noise barriers.

12. Assistant Director of Environmental Protection (Environmental Assessment) ("AD(EA)/EPD") explained that the two proposed projects aimed at mitigating the traffic noise impact of existing roads on neighbouring residents by reducing the traffic noise at dwellings to levels at 70 dB(A) or below. The Administration would adopt different mitigation measures depending on the site conditions, including the traffic flow, the orientation and design of nearby buildings and the distance between the carriageway and the buildings. Under the proposed projects, priority would be given to the less costly option of road resurfacing using low-noise surfacing materials to alleviate road traffic noise. AD(EA)/EPD and Project Manager (Major Works), Highways Department ("PM(MW)/HyD"), said that the construction cost of noise barriers might differ from project to project. Generally speaking, the construction costs of cantilevered noise barriers or semi-enclosures were higher than that of vertical noise barriers.

13. Mr Holden CHOW further enquired about the cost difference between vertical noise barriers and cantilevered noise barriers. The Chairman enquired whether the Administration, while aiming at achieving the noise reduction required, had considered carefully the construction costs and feasibility of adopting different types of noise barrier design, so as to identify

the most cost-effective solution for noise mitigation. Mr Vincent CHENG raised a similar question.

14. PM(MW)/HyD said that the construction cost of semi-enclosures, which could achieve better noise reduction performance, was about double to triple that of vertical noise barriers or cantilevered noise barriers. Depending on the noise reduction required (e.g. the traffic noise impact on some dwellings), priority would be given to using vertical noise barriers or cantilevered noise barriers. The larger semi-enclosures or full enclosures would be considered only when necessary.

15. Mr Vincent CHENG said that he had no objection to the two proposed projects in principle. However, he considered that the capital costs of the two proposed projects were on the high side. Expressing a similar view, Mr Wilson OR considered that the Administration should strengthen the control of the estimated costs and expenditure of works projects. Dr Junius HO commented that the Administration should report to LegCo the actual expenditure of the two proposed projects in a timely manner, including the spending position of the contingencies provided. Mr CHENG and Dr HO urged that for the sake of ensuring the proper use of public resources, the Administration should assess the need of noise barriers ahead of time in implementing future development projects, so as to obviate the need to retrofit noise barriers on existing roads in the future. Mr CHENG also asked the Administration if there was any possibility of adopting other noise mitigation measures, so as to reduce the overall construction cost.

16. PM(MW)/HyD and AD(EA)/EPD replied that the Administration had adopted direct noise mitigation measures, such as retrofitting of noise barriers, on existing roads that generated excessive traffic noise. Since the Environmental Impact Assessment Ordinance came into force in 1998, the Administration was required to conduct environmental impact assessment ("EIA") in accordance with the Ordinance when planning new development projects (e.g. road projects). Based on the EIA results, the Administration would consider during the planning process the construction of noise barriers on roads for reducing traffic noise, so as to obviate the need to retrofit noise barriers in the future. PM(MW)/HyD said that open tender was conducted for the two proposed projects. The proposed works would be delivered under New Engineering Contract, which provided a mechanism of collaboration in risk management to control the project risks. Furthermore, the Highways Department ("HyD") was planning to engage a consultant to conduct a study and review within this year for further optimizing the materials and design of noise barriers and reducing the construction cost.

17. The Chairman hoped that HyD could expedite the study on noise barriers. In response to further enquiries from Mr Vincent CHENG, PM(MW)/HyD said that the study and review was expected to be completed in two years. The Administration would report to LegCo the findings of the consultancy study in a timely manner.

18. Mr Holden CHOW enquired whether the Administration would adjust the design and materials of the noise barriers to be constructed under the proposed projects based on the recommendations put forward by the consultancy study, so as to further reduce the overall construction cost. Mr CHOW requested the Administration to provide examples of previous projects in which cost reduction could indeed be achieved.

19. PM(MW)/HyD replied that parallel tendering was conducted for the proposed projects and construction works would commence as soon as possible after funding approval had been granted by FC. Under the prevailing mechanism, contractors might propose to the Administration optimization of project design to reduce cost. Every works contract contained provisions on cost reduction, by which the contractor might propose cost-saving designs. The Administration would actively consider discussing the relevant arrangements with the contractors.

20. Mr LUK Chung-hung enquired about the incentives to motivate contractors to propose to the Administration cost-saving design solutions after they had been awarded contracts of the projects. PM(MW)/HyD said that the general conditions of contracts for capital works projects provided for a pain-gain share mechanism. For example, if the cost estimate for a project could be reduced from \$100 million to \$80 million as a result of optimization of project design proposed by the contractor, the cost saving would be shared between the contracting parties under the relevant mechanism, i.e. the \$20 million saving would be shared evenly between the Administration and the contractor. Furthermore, the Tender Assessment Panel would consider both the tender price and the past performance ratings (such as progress of works and safety ratings) of a tenderer in evaluating the tender. Contractors having good performance in past projects stood a better chance of being awarded contracts in the future.

Construction period and payment arrangement of the proposed projects

21. Mr LEUNG Che-cheung expressed support for the proposed projects. However, he commented that the construction period of the two proposed projects was rather long given their expected completion date in 2027-2028, which might lead to increase in the project expenditure. He requested the

Administration to explain why the construction period of the projects was expected to span up to seven years. The Deputy Chairman advised that the schedule of phasing of expenditure did not reflect the construction period, as installments of the project cost were usually paid to contractors after completion of the project. He asked the Administration to explain to members how the phasing of expenditure for the proposed projects was related to their construction schedule. Mr Wilson OR commented that the progress of the two proposed projects was extremely slow as works were scheduled for commencement in 2021 although the projects was upgraded to Category B in 2006.

22. In response, PM(MW)/HyD said that HyD expected the two proposed projects to be completed within a timeframe of about four years. HyD would also strive to finish the construction of the noise barriers within three years so as to allow more time for the greening works. However, due to the presence of the relatively large number of entrances/exits, traffic signals, bus stops, etc. along Po Lam Road North and Po Ning Road, HyD was required to conduct traffic impact assessment ("TIA") for the proposed projects and discuss the related works arrangement with TD and the Police. Moreover, some works could only be carried out in non-peak hours or during the night to minimize the impact on nearby residents during construction.

23. PM(MW)/HyD further said that the Administration would make most of the payment to the contractors after completion of the proposed projects. A small portion of payment was retained and would be released to contractors later after they had fulfilled all the obligations under the contract (e.g. maintenance of trees within the project boundary). Therefore, some expenditure was phased beyond the timeframe of four years (i.e. after the expected completion date of the proposed projects) for meeting the final installments payable to the contractors. Contractors who disagreed with the payment should negotiate with the Administration in accordance with the contract terms.

Consultants' fees and resident site staff costs

24. Dr Junius HO was concerned that the consultants' fees (especially the cost of resident site staff ("RSS") management) of the proposed projects were on the high side. He pointed out that for 766TH, the consultants' fees amounted to \$5.5 million and the remuneration of RSS amounted to \$39.9 million. These added up to account for about 12% of the construction cost of the project. He commented that given its profound experience in the retrofitting works of noise barriers, the Administration should utilize its existing manpower to implement the proposed projects. Dr HO criticized that

it was a waste of time and resources for the Administration to engage consultants to implement public works projects.

25. PM(MW)/HyD explained that for the sake of limiting the civil service establishment and the size of the RSS team, the Administration would engage RSS on a contract basis for works supervision to ensure the quality and safety of the construction works and monitor the contractors' compliance with the contract terms. As regards the size of the RSS team, the requirement of RSS (including the number of staff members to be engaged and the expenditure involved) was subject to the vetting and approval of the respective selection board of the government department(s) concerned in accordance with the department's internal guidelines.

26. Mr LUK Chung-hung sought details about the use of 1.6 as the multiplier applied to the average salary point in the Master Pay Scale ("MPS") to estimate the cost of RSS supplied by the consultants. He enquired whether the consultants would recruit professional and technical staff at market wage rates through tender or pay the engineering personnel on a reimbursement basis. Mr LUK requested the Administration to explain the basis for determining the minimum salary point applied to engineering personnel and the criteria adopted in engaging senior engineering personnel, and advise whether the majority of professional engineering personnel engaged in the past were hired at minimum salary points above or below MPS point 38.

27. PM(MW)/HyD responded that the RSS costs were paid on a reimbursement basis, while the consultants' fees for contract administration were preliminary estimates. MPS points 38 and 14 were the average minimum salary points applied to professional and technical staff respectively, while the actual minimum salary point offered to individual engineering staff would depend on their years of experience. The consultant should obtain the Administration's approval before conducting staff recruitment. The Administration would examine the number of engineering personnel required (including professional and technical staff). Taking the requirement of RSS for 817TH as an example, the estimated number of man-months required for professional staff and technical staff was 81 and 252 respectively. Professional staff accounted for one-fourth of the team, while the remaining three quarters were technical staff.

28. The Chairman enquired whether the remuneration of RSS included other fringe benefits. PM(MW)/HyD replied that in addition to the basic salary, the remuneration of RSS included other fringe benefits, such as allowances, end-of-contract gratuity and medical insurance.

Environmental implications

29. Mr LEUNG Che-cheung noted that one important tree would be affected during the implementation of 766TH. He enquired about the handling of and the compensatory plan for that important tree.

30. PM(MW)/HyD explained that under the planting proposals to be incorporated into the two proposed projects, the number of trees to be planted would be equal to the number trees to be removed, while shrubs would also be planted. About 177 trees and 9 000 shrubs would be planted under 766TH. Among the nine *Eucalyptus citriodora* trees at Po Lam Road North, two would be removed and suitable trees would be replanted. Meanwhile, of the about 221 trees within the project boundary of 817TH, 158 would be retained and 63 would be removed, including 62 trees to be felled and one tree to be transplanted elsewhere. About 63 trees and 12 000 shrubs would be planted. HyD would seek the views of the Leisure and Cultural Services Department on the planting arrangements.

31. The Deputy Chairman said that while the public generally welcomed the retrofitting of noise barriers, they were worried about the visual impact they caused. Referring to the use of opaque sound-absorbing panels for the noise barriers along some sections of Tolo Highway and the visual intrusion they caused, the Deputy Chairman sought details on the materials proposed to be used for constructing the noise barriers under the proposed projects, including whether the visual impact caused by the noise barriers had been considered.

32. PM(MW)/HyD said that currently, transparent or translucent materials would be used as far as possible in the construction of noise barriers or enclosures to reduce the visual impact. Transparent or translucent panels would be used for some noise barriers, while sound-absorbing panels would be used in others when necessary. Transparent panels would be used for the majority of vertical sections of noise barriers or enclosures, while translucent panels (i.e. non-reflective polished materials) would be used for the top sections of noise barriers or enclosures to reduce the glare from sunlight reflection.

Other views

33. Mr Wilson OR said that there were other residential dwellings in Tseung Kwan O that were also affected by traffic noise. He enquired about the Administration's long-term measures to address the traffic noise impact on those dwellings. Mr OR further said that the problem of traffic congestion in Tseung Kwan O was getting more serious as the population in the district grew.

In particular, he was concerned about the traffic arrangements during construction and how further load on the road traffic could be avoided.

34. AD(EA)/EPD reiterated that the proposed projects aimed at mitigating the traffic noise impact at levels exceeding 70 dB(A) on neighbouring dwellings due to the earlier design and development. At present, the Administration was required to conduct EIA when planning major development projects or new roads, during which relevant measures such as retrofitting of noise barriers would be considered to mitigate the traffic noise. In addition to constructing noise barriers, the proposed projects also included laying of low noise surfacing materials at certain road sections. Regarding the excessive traffic noise generated from existing roads, it was the Administration's policy to consider implementing direct noise mitigation measures, such as retrofitting noise barriers, subject to practicability and availability of resources.

35. PM(MW)/HyD said that consultants had conducted TIA during the design stage of the projects, including analysis of the traffic volume. The TIA reports had been submitted to TD for approval. The Administration would maintain the number of traffic lanes on Po Lam Road North and Po Ning Road during peak hours. According to the TIA, the proposed works could be completed within the shortest possible timeframe of three years. Moreover, a Traffic Management Liaison Group comprising representatives from the consultants, TD and the Police would be set up to examine the traffic arrangements made by the contractors during construction, so that the daily life of residents would not be disturbed.

36. Mr LUK Chung-hung said that requests from residents in different districts for retrofitting noise barriers on existing roads had been rejected by the Environmental Protection Department over the years on the grounds that the traffic noise did not exceed the standards. He said that residents of Tin Shui Wai reflected that they had all along been affected by the traffic noise of Tin Ying Road, and he requested the Administration to review the traffic noise standards for residential premises in a timely manner.

Voting on PWSC(2021-22)6

37. There being no further questions from members on the item, the Chairman put [PWSC\(2021-22\)6](#) to vote.

38. The item was voted on and endorsed. The Chairman consulted members on whether the item would require separate voting at the relevant meeting of FC. No member raised such a request.

Head 704 — Drainage

PWSC(2021-22)7	417DS	Construction and rehabilitation of trunk sewage rising mains in Yuen Long
	419DS	Construction and rehabilitation of sewage rising mains in Tai Po Kau
	420DS	Construction and rehabilitation of trunk sewage rising mains in Yau Tong

39. The Chairman advised that the proposal (i.e. [PWSC\(2021-22\)7](#)) sought to upgrade 417DS, 419DS and 420DS to Category A at the respective estimated costs of \$886.3 million, \$107.6 million and \$621.1 million in MOD prices. The Administration consulted the Panel on Environmental Affairs on the three projects on 22 March 2021. Members generally supported the submission of the three funding proposals to the Subcommittee for consideration. A report on the gist of the Panel's discussion was tabled at the meeting.

Schedule and prioritization of rehabilitation works of sewage rising mains

40. The Deputy Chairman acknowledged the importance of upgrading the sewage rising mains in Hong Kong to twin-pipe system and expressed support for the proposed projects. He enquired about the schedule and progress of the aforesaid upgrading works.

41. Director of Drainage Services ("DDS") said that at present, there were about 180 kilometres of underground sewage rising mains in Hong Kong, of which more than 90% were of single-pipe design. About two kilometres of sewage rising mains had been rehabilitated, while works were being carried out for another some nine kilometres of sewage rising mains to upgrade them to twin-pipe system upon completion. The Administration planned to carry out rehabilitation and upgrading works for another some 75 kilometres of sewage rising mains in the coming 10 years to enhance their operational reliability and prevent pollution caused by leakage.

42. Mr Holden CHOW enquired how the Administration determined the priority accorded to the rehabilitation works of different sections of sewage rising mains and whether a preliminary list had been drawn up for the relevant projects. Dr CHENG Chung-tai raised a similar question.

43. DDS said that prioritization was done using a risk-based approach, under which the risk and consequence of failure of different sections of sewage rising mains were assessed systematically with a host of factors taken into account, such as the number of years for which the mains had been in use and

their previous records of leakage and failure. The Administration would constantly reprioritize the rehabilitation works for different sections of sewage rising mains in view of their conditions.

Application of innovative technologies

44. Dr CHENG Chung-tai enquired whether the Administration had considered working with the Innovation and Technology Bureau to adopt new technologies that could facilitate the monitoring of pipe conditions. DDS said that the Drainage Services Department ("DSD") had been collaborating with research institutes, including universities, to carry out studies. With reference to the smart water meter system of the Water Supplies Department, studies were conducted on the monitoring technologies specific to sewage rising mains and attempts were made to apply them to sewers.

Details of the proposed project in Yuen Long

45. Mr LEUNG Che-cheung expressed support for the proposed projects. Regarding 417DS, Mr LEUNG was concerned about the project's ability to cope with the increasing service demand arising from future population growth in Yuen Long. He also enquired whether leakage was found in existing pipes and to what facilities the two sections of sewage rising mains proposed to be rehabilitated and constructed would be connected.

46. DDS replied that under the proposed project, rehabilitation of existing mains had to be carried out after completion of the construction works of the new mains, and this might have led to the impression that the construction time was a bit long. Nonetheless, the Administration had taken into account the population projection for critical years in the future to ensure that the sewage rising mains would have sufficient capacities to meet the demand arising from future population growth.

47. DDS further said that under the prevailing practice, the Administration would take follow-up action immediately on discovering pipe leakage. After completion of the proposed project, the new and rehabilitated sewage rising mains would be cross-used. As illustrated in Annex 1 to Enclosure 1 to [PWSC\(2021-22\)7](#), the two sections of sewage rising mains would be connected to the existing facilities, namely Yuen Long Sewage Treatment Works to the east and San Wai Sewage Treatment Works to the west.

48. Mr Michael TIEN expressed support for the proposed projects. He sought information on the following:

- (a) details of the cured-in-place-pipe ("CIPP") lining technology (commonly referred to as "insertion into pig intestines" in Chinese) often adopted by DSD for rehabilitation of pipes, and whether the apparent reduction in the diameter of the pipe as a result of using the method was only a matter of visual perception while the drainage capacity was unaffected;
- (b) the reason for not replacing all the existing mains with new mains as in the case of 419DS, but to rehabilitate existing mains and construct new mains under 417DS and 420DS; and
- (c) the expected change to the cost estimate of 417DS to be carried out in Yuen Long if all existing mains were to be replaced with new mains under the project.

49. DDS advised that:

- (a) when applying the CIPP lining technology, a soft polyester liner was inserted into an existing pipe. The liner was then cured by steam or ultraviolet light until it hardened and formed a new pipe. The impact on the drainage capacity would be assessed prior to applying the method to ensure that the drainage capacity would not be affected. It was a well-developed technology applied to ongoing pipe rehabilitation works with proven reliability and effectiveness. The rehabilitated pipes would have an expected service life of up to 25 years, which was similar to new pipes. The Administration would explore adopting even more advanced rehabilitation technologies to further enhance the cost-effectiveness of rehabilitation works;
- (b) to enhance the cost-effectiveness of works projects, different construction options were adopted in view of the on-site conditions of the project location. The existing mains involved in 419DS had smaller diameters than those involved in the other two projects. They also had a more convoluted alignment and had been in use for a longer time. Upon a comprehensive assessment, the Administration considered it more cost-effective to construct new twin mains under the proposed project than to rehabilitate the existing mains and construct new single-pipe mains. In the case of 417DS, on the other hand, the cost of constructing new mains was more than 30% higher than rehabilitating the existing mains. It would also be extremely difficult to identify a suitable alignment

option for construction of new twin mains. In view of the above, and after comparing the cost-effectiveness of different construction options, the Administration proposed that, except for 419DS, the two other projects should include both construction and rehabilitation of mains; and

- (c) it was difficult to identify locations in the developed areas of Yuen Long for construction of mains with larger diameters. The Administration believed that for 417DS, it was unlikely to come up with an alignment option better than the one currently proposed. Even if space could be identified for construction of new twin mains, excavation works at deeper levels underground would likely be required, resulting in much higher project cost.

Avenues of public consultation

50. Noting that the Administration had consulted the Yuen Long District Council ("DC") on 417DS, Mr Holden CHOW enquired whether the Area Committees ("ACs") and other local organizations were also consulted.

51. DDS replied that it was the Administration's normal practice to consult the local DCs on such kind of projects. It would also pay heed to the views of members of the local community as far as possible during implementation of the projects. Mr Holden CHOW suggested that the Administration might consider consulting the relevant ACs before commencing works in the future.

Voting on PWSC(2021-22)7

52. There being no further questions from members on the item, the Chairman put [PWSC\(2021-22\)7](#) to vote.

53. The item was voted on and endorsed. The Chairman consulted members on whether the item would require separate voting at the relevant meeting of FC. No member raised such a request.

Head 703 — Buildings

PWSC(2021-22)8	23TP	Public Vehicle Park at Areas 4 and 30 (Site 2), Sheung Shui
	24TP	Public Vehicle Park at Area 99, Tung Chung

Head 711 — Housing

85TI	Public Transport Interchange at Tung Chung Area 99
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54. The Chairman advised that the proposal (i.e. [PWSC\(2021-22\)8](#)) sought to upgrade 23TP, 24TP and 85TI to Category A at the respective estimated costs of \$385.1 million, \$167.5 million and \$269 million in MOD prices. The Government consulted the Panel on Transport on the three projects on 5 January 2021. Members supported the submission of the three funding proposals to the Subcommittee for consideration. A report on the gist of the Panel's discussion was tabled at the meeting.

Number of parking spaces

55. The Deputy Chairman held the view that shortage of parking spaces in Hong Kong was an undisputed fact, especially for commercial vehicles. Noting that the two proposed public vehicle parks ("PVPs") were among the projects committed in the 2019 Policy Address Supplement for increasing the provision of parking spaces as appropriate, he expressed strong support for the item.

56. Dr Junius HO opined that the number of parking spaces provided in the proposed PVP under 23TP was inadequate, and Mr Holden CHOW made the same comment about the proposed PVP under 24TP. Dr Junius HO requested the Administration to explain what was meant by TD's estimate that there was demand for about 320 private cars ("PCs") public parking spaces and 10 light goods vehicles ("LGVs") public parking spaces in the vicinity. He also enquired whether it was possible to increase the number of parking spaces provided at the project site in Sheung Shui. Mr Holden CHOW enquired how the Administration determined the number of parking spaces proposed to be provided at the project site in Tung Chung.

57. Assistant Commissioner (Task Force), Transport Department ("AC(TF)/TD") said that based on parking surveys and observation, including the recorded number of illegal parking and the recorded utilization rates of parking spaces at nearby car parks both under short-term tenancies and within public and private housing developments, TD estimated that there was public parking demand for about 320 PCs public parking spaces and 10 LGVs public parking spaces in the vicinity of the project site in Sheung Shui. Meanwhile,

there would be public parking demand for about 80 PCs public parking spaces in the vicinity of the project site in Tung Chung. He added that the public housing developments located next to the two proposed projects respectively would also provide ancillary parking spaces for PCs, motorcycles and LGVs in accordance with the provision standards for parking facilities under the Hong Kong Planning Standards and Guidelines to cater for their own parking demand.

Proportion of parking spaces providing charging facilities for electric vehicles

58. Mr Michael TIEN pointed out that the Administration had announced in this year's Budget the target of ceasing the new registration of fuel-propelled PCs in 2035 or earlier. As the proposed PVPs would provide electric vehicles ("EV") charging facilities for only not less than 30% of the parking spaces, which seemed inadequate, he doubted if they could support the long-term policy objective of promoting EV popularization. He enquired why the Administration did not provide EV charging facilities for more parking spaces. Mr MA Fung-kwok expressed similar concern.

59. AC(TF)/TD replied that the Administration provided EV charging facilities for not less than 30% of the parking spaces at the proposed PVPs pursuant to the requirements under the Technical Circular (Works) on Green Government Buildings issued by the Development Bureau and the Environment Bureau ("ENB"). EV charging enabling provisions would also be provided for the remaining parking spaces to prepare for the progressive installation of more charging facilities in view of future needs. After completion of the PVPs and depending on the prevailing users' demand for EVs, arrangement would be made to install chargers at the parking spaces already provided with EV charging enabling provisions. Furthermore, charging facilities would be provided at the proposed PVPs as required to meet the demand for charging service as part of the ongoing effort to support ENB's policy of promoting the installation of EV charging facilities at buildings.

60. Mr Michael TIEN held the view that the supply of adequate charging facilities at car parks was critical to whether vehicle owners would opt for EVs. If the Administration adopted a contrary approach by providing charging facilities at parking spaces only after the market demand had emerged, it would only create a stalemate between the supply and demand of EV parking spaces. He considered that the Administration should provide EV charging facilities for all parking spaces at new public car parks in order to incentivize the public to adopt EVs. The Chairman enquired whether the proposed PVPs, like new private buildings, were required to install fixed electrical installations for charging EV facilities at every parking space.

61. AC(TF)/TD added that follow-up action would be taken to coordinate with ENB regarding the proportion of parking spaces equipped with EV charging facilities in the proposed PVPs both before their completion and during their operation in the future. The Chairman and Mr Michael TIEN requested the Administration to provide supplementary information to explain whether it would consider increasing the proportion of parking spaces equipped with EV charging facilities under the projects.

(Post-meeting note: The supplementary information provided by the Administration was circulated to members vide [LC Paper No. PWSC127/20-21\(01\)](#) on 20 May 2021.)

Smart features adopted in the proposed public vehicle parks

62. Mr MA Fung-kwok was concerned whether the Administration would introduce the parking bay availability indicator system to the proposed PVPs to facilitate motorists' search of vacant bays. AC(TF)/TD replied that different types of smart features would be adopted under the projects, such as access control system, licence plate recognition system, parking bay information system, parking guidance and car searching system and electronic patrol system. Among them, the parking guidance and car searching system served to facilitate motorists' search of vacant bays.

Details of the proposed project in Sheung Shui

63. Dr Junius HO supported the proposed project, but considered that the capital cost was very high. He was concerned whether it was possible to enhance the efficiency and degree of convenience of the proposed PVP in Sheung Shui and increase the number of parking spaces provided in it through increasing the number of floors of the PVP; or, with future needs in mind, pursuing an alternative proposal of combining the development of the proposed project site and the adjacent public housing site and adopting a podium-type design for the PVP for better utilization of land space.

64. AC(TF)/TD said that the proposed PVP was nine storeys high, which was similar to some existing multi-storey public car parks. TD observed that the usage of the parking spaces on the higher floors of existing car parks was generally low. The current design of the proposed project was considered the most suitable as it could meet the parking demand while achieving higher usage of the parking facilities and better utilization of land space and resources.

65. Chief Architect (3), Housing Department added that when drawing up the development proposal for Areas 4 and 30 (Site 2), Sheung Shui, in which the proposed project was located, the Housing Department ("HD") had

conducted overall planning and fully utilized the maximum plot ratio and various development perimeters of the site (which included the construction sites of both the PVP and the public housing development) in adherence to the principle of optimizing land use. The construction period of the project would be lengthened by at least one year if the alternative proposal of combining the development for the PVP and the public housing was to be pursued.

66. The Chairman and Dr Junius HO requested the Administration to provide supplementary information to explain whether land space could be better utilized and more parking spaces could be provided by adopting the alternative proposal of combining the development of the proposed project site and the adjacent public housing site, with the public housing built on top of a podium-type PVP in place of the current design of providing a stand-alone PVP.

(Post-meeting note: The supplementary information provided by the Administration was circulated to members vide [LC Paper No. PWSC127/20-21\(01\)](#) on 20 May 2021.)

[At 10:23 am, the Chairman asked members if they agreed to extend the meeting for 15 minutes to 10:45 am. No member raised objection.]

Details of the proposed project in Tung Chung

67. Dr CHENG Chung-tai noted from the supplementary information paper submitted by the Administration to the Panel on Transport ([CB\(4\)852/20-21\(01\)](#)) (Chinese version only) the series of constraints encountered by the proposed project, such as the geographical conditions, geological issues and site constraints. He queried if the lack of thorough planning by the Administration at the early planning stage had resulted in the need to provide the proposed PVP at Area 99, Tung Chung, at the basement but not on the at-grade level. He also enquired why the public transport interchange ("PTI") adopted a semi-enclosed but not an enclosed design although it was located close to residential dwellings and required a noise screen cover.

68. Chief Architect (Development and Standards), Housing Department ("CA(DS)/HD") explained that within the boundary of the development project that included the two proposed facilities, geological and cost-effectiveness considerations dictated that the northeastern portion of the site was more suitable for developing higher-rise structures, while the southwestern portion of it was suitable for developing lower-rise structures (i.e. the proposed PVP and PTI). Moreover, the PVP and the PTI were located at the wind corridor

in the layout of the development project site for air to pass through. In addition to enhancing the wind availability at the location and in the surrounding areas, it also complied with the requirements under the Sustainable Building Design Guidelines, thereby enabling the proposed public housing development to be granted gross floor area concession and provide about 200 more flats.

69. Regarding the design of the PTI, CA(DS)/HD pointed out that a site-specific strategy and a passive approach of design were adopted in opting for the semi-enclosed design. In view of the currently good air circulation conditions of the location, natural wind was harnessed to maintain the air circulation at the PTI. If an enclosed design was adopted, ancillary electrical and mechanical equipment (e.g. for mechanical ventilation) would have to be provided at the PTI to help air circulation, resulting in increase in construction cost and lengthening of construction time.

70. Mr Michael TIEN pointed out that automated parking systems ("APSs") consisted only of frames used for parking vehicles, which would not block air circulation. Even when the parking system was packed with vehicles, air could still flow through the gap between them. Mr TIEN noted that it was stated in the supplementary information paper ([CB\(4\)852/20-21\(01\)](#)) (Chinese version only) that provision of an APS above the proposed PTI would affect the ventilation of the whole development project. He requested the Administration to explain the justifications for the above statement.

71. AC(TF)/TD said that the structure built for providing an APS and the vehicles using the system would block air circulation. HD was also required to consider the implication of adopting an APS to the prospect of the project being granted gross floor area concession. The Chairman and Mr Michael TIEN requested the Administration to provide supplementary information on how constructing an APS above the proposed PTI would affect the ventilation of the whole development project.

(Post-meeting note: The supplementary information provided by the Administration was circulated to members vide [LC Paper No. PWSC127/20-21\(01\)](#) on 20 May 2021.)

72. Mr Holden CHOW pointed out that the bend on Ying Tung Road was currently prone to congestion caused by vehicles accessing Ying Tung Estate. He was concerned that the situation might be worsened by the establishment of the proposed PTI at the location. Mr CHOW enquired whether the Administration had conducted traffic impact assessment for the proposed project and whether it had planned any road improvement for the said location to cope with the additional traffic arising from the PTI.

73. AC(TF)/TD said that the Administration had improved the traffic signal arrangement at the junction of Ying Tung Road and Ying Hei Road in March 2020. In support of the proposed PVP and PTI, related road improvement works would be carried out later at the bend on Ying Tung Road. In addition, Road P1 (Tai Ho—Sunny Bay Section) under planning would enable vehicles from Tung Chung New Town Extension (East) to access the urban areas directly by North Lantau Highway via the proposed Tai Ho Interchange without routing through Tung Chung Town Centre.

Voting on PWSC(2021-22)8

74. There being no further questions from members on the item, the Chairman put [PWSC\(2021-22\)8](#) to vote.

75. The item was voted on and endorsed. The Chairman consulted members on whether the item would require separate voting at the relevant meeting of FC. Dr CHENG Chung-tai requested that the item (i.e. [PWSC\(2021-22\)8](#)) be voted on separately at the relevant meeting of FC.

76. The meeting ended at 10:43 am.

Council Business Division 1
Legislative Council Secretariat
21 May 2021