

**立法會**  
**Legislative Council**

LC Paper No. CB(1)475/11-12  
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by the Administration)

Ref : CB1/PL/TP/1

**Panel on Transport**

**Minutes of special meeting held on  
Wednesday, 26 October 2011, at 8:45 am  
in Conference Room 3 of the Legislative Council Complex**

**Members present** : Hon Andrew CHENG Kar-foo (Chairman)  
Hon CHEUNG Hok-ming, GBS, JP (Deputy Chairman)  
Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP  
Hon LAU Kong-wah, JP  
Hon Miriam LAU Kin-yee, GBS, JP  
Hon Abraham SHEK Lai-him, SBS, JP  
Hon LI Fung-ying, SBS, JP  
Hon WONG Kwok-hing, MH  
Hon Jeffrey LAM Kin-fung, GBS, JP  
Hon Ronny TONG Ka-wah, SC  
Hon KAM Nai-wai, MH  
Hon CHAN Hak-kan  
Hon WONG Sing-chi  
Hon IP Wai-ming, MH  
Hon LEUNG Kwok-hung  
Hon Tanya CHAN  
Hon Albert CHAN Wai-yip

**Members attending** : Hon Audrey EU Yuet-mee, SC, JP  
Hon IP Kwok-him, GBS, JP

**Members absent** : Hon Tommy CHEUNG Yu-yan, SBS, JP  
Hon Mrs Regina IP LAU Suk-yea, GBS, JP

**Public Officers attending** : **Agenda item I**

Ms Eva CHENG, GBS, JP  
Secretary for Transport and Housing

Ms Maisie CHENG Mei-sze, JP  
Deputy Secretary for Transport and Housing  
(Transport)1

Mr Edward TO Wing-hang  
Principal Assistant Secretary (Transport)5  
Transport and Housing Bureau

Mr Peter LAU Ka-keung, JP  
Director of Highways

Mr Albert CHENG Ting-ning, JP  
Project Manager/Hong Kong-Zhuhai-Macao Bridge  
Highways Department

Mr Anthony LOO Khim-chung, JP  
Assistant Commissioner/Planning  
Transport Department

**Clerk in attendance:** Ms Joanne MAK  
Chief Council Secretary (1)2

**Staff in attendance :** Ms Macy NG  
Senior Council Secretary (1)2

Ms Emily LIU  
Legislative Assistant (1)2

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Action

- I Latest progress of Hong Kong-Zhuhai-Macao Bridge (HZMB) related infrastructure projects in Hong Kong**
- |                                  |  |
|----------------------------------|--|
| (LC Paper No. CB(1)126/11-12(01) | - Administration's paper on latest progress of HZMB related infrastructure projects in Hong Kong |
| LC Paper No. CB(1)133/11-12      | - Paper on HZMB prepared by the Legislative Council Secretariat (Updated background brief)       |

The Secretary for Transport and Housing (STH) briefed members on the Administration's paper setting out the latest progress of HZMB related infrastructure projects in Hong Kong and funding applications to be made to the Public Works Subcommittee (PWSC) and the Finance Committee (FC) for funding support for the following projects:

- (a) \$30,433.9 million (in money-of-the-day (MOD) prices) for the construction of the HZMB Hong Kong Boundary Crossing Facilities (HKBCF);
- (b) \$16,189.9 million (in MOD prices) for the detailed design and construction of the Hong Kong Link Road (HKLR); and
- (c) \$1,909.6 million (in MOD prices) for the detailed design, site investigation and advance works of the Tuen Mun-Chek Lap Kok Link (TM-CLKL).

2. The Project Manager/HZMB of Highways Department briefed members with the aid of power-point on the latest progress of HZMB related infrastructure projects in Hong Kong, with emphasis on the environmental protection measures already adopted in the planning and design stages of the projects. Members noted that the judicial review (JR) against the decisions of the Director of Environmental Protection (DEP) as regards the approval of the Environmental Impact Assessment (EIA) Reports and the granting of Environmental Permits (EPs) relating to the HZMB HKBCF and HKLR projects had caused delay. Because of the legal proceedings, the construction commencement had about one year's difference with the original one. The Administration planned to seek funding from the FC in November 2011 and commence the HZMB related local projects before the end of 2011, if the funding applications

were approved. The Administration would strengthen the manpower, use more plants and adjust the construction method in order to compress the works programme, with a view to completing the works and commissioning the HZMB in 2016 as scheduled.

### Economic benefits and strategic value of HZMB

3. In response to members' enquiries on the economic benefits of the HZMB project and the basis of evaluation of the economic benefits, STH and Deputy Secretary for Transport and Housing (Transport)<sup>1</sup> said that the three governments had carefully evaluated the economic benefits arising from the HZMB project. It was estimated that the net economic benefits to the three places at discounted present value would be around RMB40 billion over a 20-year period, with RMB23 billion for Hong Kong, RMB13 billion for the Mainland and RMB4 billion for Macao. STH advised that based on the results of the traffic volume forecast, the consultant commissioned by the three governments had evaluated the benefits with the HZMB from savings in transport costs, value of time saved for travellers, induced traffic volume generated between the three territories, and value of time saved for goods on road, etc. At the request of the Chairman, STH undertook to provide detailed information on the economic benefits of HZMB in writing after the meeting.

Admin

4. Mr Jeffrey LAM enquired about the strategic value expected to be achieved by the HZMB. STH advised that the HZMB project would enable the formation of a strategic road network linking Hong Kong, Zhuhai, Macao and Shenzhen, thereby further enhancing the transportation and aviation hub status of Hong Kong. With its proximity to the Hong Kong International Airport, HKBCF would serve as a strategic multi-modal transportation hub. Mr Jeffrey LAM welcomed the Administration's plan to commence the HZMB related local works as soon as possible as the HZMB project had very important strategic value in promoting the economic development of Hong Kong, Macao and Western Pearl River Delta (PRD). He expressed support for the Administration's funding proposals.

### Work progress of TM-CLKL and Tuen Mun Western Bypass (TMWB)

5. Mr CHEUNG Hok-ming expressed disappointment that the HZMB related local projects had been delayed for about one year due to the JR case. He said that Members belonging to the Democratic Alliance for Betterment and Progress of Hong Kong supported the funding proposal and the early commencement of the HZMB related local

projects. Pointing out that in the JR case, the applicant had explicitly excluded the TM-CLKL EIA from the JR application, Mr CHEUNG was concerned about whether the Government would be subject to further challenge by JR on the EIA of TM-CLKL and TMWB in the future, leading to further delay of the works programme. Noting that the works of the sub-sea tunnel of TM-CLKL connecting HKBCF with Tuen Mun (northern connection of TM-CLKL) were planned to be completed in 2017, Mr CHEUNG was concerned that if the works were further delayed, the existing Tuen Mun Road, which would be saturated in 2017 in anticipation, would not be able to cope with the increase in traffic volume after the commissioning of the HZMB. He enquired whether the Administration had considered measures to alleviate the traffic congestion of Tuen Mun Road, if the northern connection of TM-CLKL could not be commissioned in 2017 as scheduled.

6. STH responded that the Government was not in a position to predict whether there would be JR on the EIA of TM-CLKL and TMWB. She, however, pointed out that the Court of Appeal had confirmed the validity of the EPs issued by the DEP for the HZMB related local projects. She further said that although the applicant had explicitly excluded the TM-CLKL EIA from the JR application, the construction schedule had still been affected because the TM-CLKL southern landfall reclamation (exit of the sub-sea tunnel) would be taken forward under the same works contract together with the reclamation of the HKBCF and to be constructed at the same location at the same time.

7. Assistant Commissioner/Planning of Transport Department supplemented that as the northern connection of TM-CLKL would not affect the commissioning of the HZMB, the Administration had no intention to compress this part of works, which would be completed in 2017. He further pointed out that according to the latest review of the traffic conditions on the road corridor comprising Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway, certain road sections, in particular Tuen Mun Road (Sham Tseng section), would be operating beyond capacity starting from 2017. The commissioning of the northern connection of the TM-CLKL in 2017 would be in time to meet forecast traffic demands and the Administration considered it unnecessary to compress this part of the works.

8. Mr CHEUNG Hok-ming further enquired whether the Administration anticipated any difficulties to be met on land resumption for the purpose of constructing TMWB. STH said that the Administration had been conducting extensive consultations on the

TMWB project and had collected different views on the alignment from various sources. Based on the views collected, the Administration had considered ten different alignment options. Through detailed discussions with the stakeholders, the Administration had selected the current recommended alignment, which was supported by relevant District Councils and Rural Committees, amongst the ten options. In the course of discussion and consideration, the Administration had striven to minimize the impact to local residents and avoid the need for land resumption as far as possible. STH added that with the extensive public consultation, it was hoped that the risk of challenge by JR on the EIA of TM-CLKL and TMWB would be minimized.

9. In response to Mr Jeffrey LAM's question about the impact on North Lantau traffic in case the relevant HZMB related local projects could not be commissioned as scheduled, STH advised that since the works of the northern connection of the TM-CLKL would be deferred by one year to 2017, Tuen Mun residents had to use the existing route to the Hong Kong International Airport via Ting Kau Bridge and Tsing Ma Bridge before its commissioning. With full commissioning of the TM-CLKL, the traffic volume of the two bridges would be relieved.

#### Quality control of works

10. Mr WONG Sing-chi expressed concern about whether the quality of works would be affected due to the need to implement the compressed works programme. Sharing Mr WONG's view, Mr IP Wai-ming was also concerned about the occupational safety of workers, which might be compromised in implementing the compressed works programme.

11. STH assured members that the adjustment of works and construction method was premised on the safety of workers and quality of works. DHy supplemented that to accelerate construction of the HKBCF infrastructures, facilities and buildings, instead of simply strengthening the manpower and lengthening their working hours, the Administration had considered various factors, including the schedule of the whole project, the works nature and time required for implementation, the feasibility of compression as well as the economic efficiency of the adjustment. He cited an example that for the reclamation works of HKBCF, the Administration had considered the feasibility of dividing the reclamation area into different zones so as to provide land by phases for the construction of superstructures and infrastructures of the HKBCF. The Administration had also considered the feasibility of adjusting the construction method, such as by adopting more sand as filling material to

shorten the consolidation process. After consideration of various factors, the Administration considered the compressed programme viable.

12. DHy further said that the Joint Works Committee of the Three Governments (the Committee) comprising representatives of the governments of Guangdong, the Hong Kong Special Administrative Region (HKSAR) and the Macao SAR had established a legal entity within the Mainland, called the HZMB Authority, to implement the Main Bridge of the HZMB. The HZMB Authority was responsible for co-ordinating the implementation of the construction, operation, maintenance and management of the Main Bridge. The Committee would also play a supervisory role over important matters including the programme, quality and safety of the works of the Main Bridge. He added that the HZMB Authority had already, as suggested by the HKSAR Government, engaged an independent consultant to strengthen the work on quality control. As regards the HZMB related local projects, there had been established quality control guidelines governing the quality of public works in Hong Kong.

#### Construction manpower

13. Mr WONG Sing-chi expressed concern about the adequacy of construction manpower in Hong Kong to meet the increasing demand arising from the implementation of a large number of infrastructure projects in the following decade. He asked whether the Administration had worked out a projection of construction manpower supply in Hong Kong for the next ten years and examined whether the projected manpower supply could cater for the demand arising from the major construction projects, including the HZMB, to be implemented.

14. In reply, STH and DHy said that the Development Bureau and the Construction Industry Council (CIC) had studied the demand and supply of professionals, supervisors/technicians and workers for the construction industry in the next few years. The study had also examined the demand for construction workers of different trades and skill levels. To address the anticipated minor shortage of manpower of individual trades, the Administration had collaborated with the CIC to launch various initiatives such as the "Build Up Training Programme" to attract more people joining the industry and enhance the skills and competitiveness of the construction workforce through training and trade testing. The Government hoped that with the measures taken, the manpower demand could be met. At the request of Mr WONG, STH agreed to provide information on the Administration's measures to ensure the adequacy of

construction manpower to meet the increasing demand arising from the implementation of various infrastructure projects.

15. Mr WONG Kwok-hing asked whether the Administration would give priority to recruiting construction workers who were residents of Tung Chung, Tuen Mun and Tin Shui Wai for the HZMB project, given the close proximity of these districts to the work sites and the high unemployment rate of the districts. STH responded that recruitments at Tung Chung, Tuen Mun and Tin Shui Wai areas for construction workers for the HZMB project would be possible.

#### Funding required for HZMB local related projects

16. Mr WONG Kwok-hing said that Members belonging to the Hong Kong Federation of Trade Unions strongly supported early commencement of the HZMB related local projects as well as the funding proposal under discussion. Mr WONG said that as the projects had been delayed for about a year, no more time and public money should be wasted. Noting that the overall cost increase for the HZMB related local projects due to the JR case was estimated to be \$6.5 billion (in MOD prices), he asked whether the cost had already covered any cost increase for the TM-CLKL or any other related projects.

17. STH advised that the overall cost increase of about \$6.5 billion was due to: (i) adjustment in construction method to compress the construction timetable in order to ensure the commissioning of the HZMB in end 2016 (the associated cost increase was about \$4.15 billion); and (ii) increase in construction prices (the associated cost increase was about \$2.35 billion). She further said that the Administration had indeed adopted a very conservative estimate of \$6.5 billion which covered only the concerned cost increase for the HKBCF and the advance works (reclamation work for the southern landfall) of TM-CLKL, but not that of the TM-CLKL and TMWB projects. As the Administration would seek funding approval for the detailed design and site investigations of the remaining works of the TM-CLKL (northern and southern connections and related works) in the current funding application exercise, the TM-CLKL project had not yet started its detailed design and it was therefore difficult to estimate the cost increase at this stage. As regards the TMWB project, it was still in the preliminary design stage, and the Administration did not have the latest estimate of the construction cost at the present moment.



18. DHy further provided information on the breakdown of the \$6.5 billion. He said that for the HKBCF project, out of the estimated cost of \$30,433.9 million in MOD prices, about \$6.3 billion in MOD prices arose from the additional cost due to the JR of the HZMB local projects, which included the additional costs for: (i) adjustment of construction method to accelerate construction of the HKBCF infrastructures, facilities and buildings, etc, including adopting more sand fill and associated plant/equipment for the reclamation works, and the use of additional manpower, equipment and facilities (the associated cost increase was about \$4.05 billion) for accelerating the works progress; and (ii) increase in construction prices (the associated cost increase was about \$2.25 billion). He further said that the remaining \$0.2 billion of the \$6.5 billion cost increase was induced by the advance works for the TM-CLKL. Out of the estimated cost of \$1,909.6 million in MOD prices, about \$0.2 billion arose from the additional cost due to the JR case, which included: (i) the costs due to adjusting the construction method, including adopting more sand as filling material; and the use of additional manpower, equipment and facilities (the associated cost increase was about \$0.1 billion) for accelerating the works progress; and (ii) the increase in construction prices (the associated cost increase was about \$0.1 billion).

19. While supporting the implementation of the HZMB project, Mr KAM Nai-wai expressed concern about the cost-effectiveness of adopting the adjusted construction method. To facilitate members' consideration on the funding proposal, he requested the Administration to provide, in writing, a breakdown of the \$6.5 billion cost increase in detail, including the additional cost incurred by adjusting the construction method, and details of the increases in construction prices, before the relevant PWSC meeting. Pointing out that the Administration had sought FC's funding approval for implementing various HZMB related items at different times, Mr KAM said that he would like to have a full picture of the total cost contributed by the Government of the HKSAR for the HZMB project, including the cost of the HZMB Main Bridge and related local infrastructure projects in MOD prices.

Admin

20. STH agreed to provide the requested breakdown and all approved funding relating to the HZMB project. She added that the Administration had examined carefully the adjustments made to the construction method and the increases in construction prices.

21. Noting that the \$6.5 billion was only a conservative estimate as advised by the Administration, Mr IP Wai-ming asked if there might be further cost increases in the future. Mr IP further asked whether the three governments had discussed the consequences in case the HZMB related local projects in Hong Kong were unable to tie in with the commissioning of the HZMB Main Bridge by 2016.

22. STH reiterated that the \$6.5 billion only covered the additional costs required to compress the works programme and the increase in construction prices for the HKBCF and advance works of TM-CLKL, and had excluded the cost increase of the TMWB and the remaining works of the TM-CLKL. STH reiterated that as the TM-CLKL and TMWB projects had not yet started the detailed design, it was difficult to estimate the cost or any cost increase due to the JR case at this stage. She further said that the works of the Main Bridge within Mainland waters and the Zhuhai Macao Boundary Crossing Facilities had commenced in end 2009 as scheduled and were expected to be completed by 2016 as planned. The Administration was confident that the HZMB related local projects could be commissioned on time if the relevant works could commence before the end of 2011.

Admin

23. The Chairman and Mr KAM Nai-wai shared Mr IP's concerns and requested the Administration to provide information on the funding required for taking forward the remaining works of the TM-CLKL and the detailed design and construction of the TMWB. STH undertook to provide a rough estimate based on information available after the meeting.

#### Impact on work arising from the JR case

24. Ms Audrey EU said that based on the Administration's paper, it seemed to her that the work of taking forward the HZMB project had been in progress, as follows –

- (a) the works of the bridge section of the Main Bridge had commenced;
- (b) detailed design of the superstructures and infrastructures of the HKBCF were commenced in December 2010; and
- (c) tenders for the first Design and Build contract of the HKLR had already been invited.

Ms EU requested STH to explain why it was said that the schedule of the construction commencement was different by about one year.

*(Due to technical problem of the public address system, the Chairman suspended the meeting at 9:53 am. The meeting resumed at 10:00 am.)*

25. STH advised that for the HZMB related local projects, it was originally planned to commence construction before end 2010, but the works commencement date had been affected by the legal proceedings of the JR case. For example, tender for the reclamation works should have been invited earlier before February 2011. At that time, the Administration had still decided to go ahead with the tendering work notwithstanding the uncertainty of the need to conduct the relevant EIA again. To cope with the uncertainty, the Administration had included certain terms and conditions in the tender documents to avoid possible claims by the tenderers in the situation that the Administration failed to award the tender. By making such arrangements, the Administration managed to invite tender and undertake the necessary preparatory work, so as to enable works to commence as early as possible after funds were approved by the FC.

26. Mr LEUNG Kwok-hung asked whether the Transport and Housing Bureau (THB) had discussed with the Environment Bureau (ENB) on the possible consequence in terms of cost implications in case DEP lost her appeal case and if so, whether the Administration had endeavored to take any measures to minimize the cost increase. STH responded that the Administration respected Hong Kong residents to exercise their rights to apply for JR. She pointed out that THB and ENB played different roles for the HZMB project, as THB was the project proponent whereas ENB was the regulatory authority.

27. The Chairman urged the Administration to ensure adoption of all possible environmental protection measures for the HZMB related local projects to avoid any further disputes. STH responded that the Administration had proposed a number of environmental protection measures to minimize environmental impact as far as possible, and it would ensure full compliance with the requirements of the EP conditions and requirements of other environmental protection legislation in implementing the HZMB local projects. At the request of the Chairman, STH agreed to further provide a detailed account of the environmental protection measures for the HZMB related local projects in Hong Kong.

### Reclamation works

28. Mr Albert CHAN expressed grave concern about the proposed construction method for the sub-sea tunnel of the TM-CLKL by tunnel boring machine (TBM), and the adoption of the new non-dredge reclamation method, which would be the first of its kind in Hong Kong in carrying out reclamation. He enquired whether the Administration had studied the viability of adopting such methods in Hong Kong and whether the Administration had made reference to overseas experiences in this regard. He was concerned that the Government might lack experience and be subject to claims from contractors for compensation in the future. Mr Jeffrey LAM asked whether the reclamation method proposed for the development of the third runway was same as that currently proposed for the HKBCF.

29. DHy responded that the investigation and preliminary design consultancy had proposed that the sub-sea tunnel of the TM-CLKL be constructed by TBM instead of the traditional immersed tube method. This construction method could greatly reduce dredging and disposal of substantial amount of marine sediment and minimize the impact on the marine ecology. As regards the non-dredge reclamation method, it had been used in Japan, Singapore and the United States, and had proven to be environmental friendly for it could reduce dredging and disposal of marine mud to a large extent. He added that this reclamation method was also adopted for the construction of HZMB Main Bridge, the western artificial island as well as eastern artificial island. The Administration had carried out the ground investigation works for the HKBCF island reclamation, which had affirmed that the new reclamation method was suitable for Hong Kong. STH said that the proposed reclamation method for development of the third runway would be similar to the non-dredge reclamation method. She, however, added that it had not yet been decided whether reclamation would be required for the development of the third runway as feasibility studies would have to be conducted first.

30. Ms Miriam LAU noted that the HKLR would be passing through the Scenic Hill in the form of an approximately 1 km long tunnel and underneath the existing Airport Road and Airport Express Line, and daylighting at a new reclamation along the east coast of the Airport Island. The project also included construction of approximately 1.6 km long dual three-lane at grade road along the east coast of the Airport Island between the tunnel exit and the HZMB HKBCF. Ms LAU asked why, instead of using a sub-sea tunnel, at-grade highway was proposed to be used to connect the HKLR and HKBCF. She considered that using

sub-sea tunnel would avoid posing adverse visual impact to Tung Chung residents and minimize cost as reclamation works, which were expensive, could then be avoided.

31. DHy said that in response to concern expressed by some Tung Chung residents over the visual impact of the original design of the HKLR sea viaduct section in front of Tung Chung, the Administration had replaced this section by a tunnel-cum-at-grade road scheme upon review. The Administration had also considered an option of constructing a sub-sea tunnel connecting the HKBCF with the tunnel passing through the Scenic Hill. However, this option would necessitate the use of the conventional mud dredging reclamation method, which was not in line with the Government policy of minimizing environmental impact as far as possible. By constructing the proposed at grade highway, the new non-dredge reclamation method, which was more environmental friendly, could be adopted. In addition, the construction of a sub-sea tunnel might require more reclamation works to connect the sub-sea tunnel with the at-grade roads of the HKBCF. After comparing the two options, the Administration considered the present design the most practicable.

#### Provision of cross-boundary passenger ferry services at HKBCF

32. While appreciating the construction of the HKBCF, which together with the adjacent Hong Kong International Airport, would make cross-boundary land and freight transport more convenient, Ms Miriam LAU asked about the feasibility of making use of the HKBCF to provide cross-boundary passenger ferry services. She pointed out that at present, there were only cross-boundary ferry routes operating from the Hong Kong-Macau Ferry Terminal in Sheung Wan and the China Ferry Terminal in Tsim Sha Tsui, connecting Hong Kong to Macau and PRD ports. She opined that if cross-boundary passenger ferry services were available at the HKBCF, it would also benefit the adjacent Asia World-Expo by bringing in more visitors and hence boost the Hong Kong economy as a whole. STH responded that the Administration was of the view that the two terminals had capacity to meet projected demand. In addition, constructing a terminal at the HKBCF would incur additional cost as it was not included in the original design. The Administration would need to further consider stakeholders' views in considering whether additional cross-boundary ferry terminals were needed.

33. In response to Ms Miriam LAU's further enquiry, STH said that the design of the public transport interchange at the HKBCF would enable passengers to make use of all the different kinds of public transport means as far as possible and provide parking space for private cars as well.

Admin

34. Summing up, the Chairman concluded that the Panel supported in principle the funding proposals and submission of them to PWSC for consideration on 8 November 2011. He requested the Administration to provide the supplementary information requested by members before the PWSC meeting.

*(Post-meeting note: the Administration's supplementary information paper was issued to all Members on 1 November 2011 vide LC Paper No. CB(1)249/11-12.)*

## **II Any other business**

35. There being no other business, the meeting ended at 10:30 am.

Council Business Division 1  
Legislative Council Secretariat  
2 December 2011