

**For discussion  
19 December 2005**

**Legislative Council Panel on Transport**

**Progress Update on Possible Measures to  
Rationalise Utilisation of Build-Operate-Transfer Tunnels**

**INTRODUCTION**

This paper updates Members on the possible measures to improve the distribution of traffic among the three road harbour crossings and the utilisation of Route 3.

**BUILD-OPERATE-TRANSFER (BOT)**

2. Currently, there are four BOT tunnels in Hong Kong, namely, the Eastern Harbour Crossing (EHC), Western Harbour Crossing (WHC), Tate’s Cairn Tunnel (TCT) and Route 3 (Tai Lam Tunnel). They were constructed at different times and their operations are governed by their respective legislation. The key information on the BOT tunnels are as follows: -

	<b>EHC</b>	<b>WHC</b>	<b>TCT</b>	<b>Route 3</b>
<b>Franchise term</b>	8/1986 – 8/2016	8/1993 – 8/2023	7/1988 – 7/2018	5/1995 – 5/2025
<b>Commissioning date</b>	9/1989	4/1997	6/1991	5/1998
<b>Project cost</b>	\$2.1 billion	\$7.5 billion	\$1.9 billion	\$7.2 billion
<b>Design daily capacity</b>	78,500	118,000	78,500	118,000
<b>Daily traffic</b>	60,000	42,000	60,000	45,000

3. The BOT mode encompasses two major principles: -
- (a) The BOT mode is a good illustration of the “big market, small government” principle, and is an effective means to encourage private participation and optimise the use of public resources.
  - (b) As the franchisee of a BOT tunnel is required to make substantial upfront capital investment, it should be given the opportunity to make a reasonable return on its investment, although it is also expected to bear the commercial risk.
4. The BOT mode has both advantages and limitations. How this mode is to be applied to individual projects depends on the prevailing economic conditions, interest rate, investment opportunities and political climate. What is important is to strike a balance between optimising the use of public resources, and providing a fair operating and investment environment to the investors.
5. One of the key features of the BOT franchises is the toll adjustment mechanism. Among these four tunnels, two types of toll adjustment mechanisms are adopted: -
- (a) For both Route 3 and WHC, the governing legislation has already provided for a specified toll adjustment mechanism. Briefly, the legislation has stipulated that the franchisee may effect toll increases on certain specified dates. However, if the franchisee’s actual net revenue in any year falls short of the minimum estimated net revenue specified in the legislation for that year, the franchisee may advance the toll increase.
  - (b) As for TCT and EHC, the legislation has provided that the tolls may be varied by agreement between the Government and the franchisee. If an agreement cannot be reached, either party may submit the question of the variation of tolls for arbitration. The legislation has not set out the criteria for determining toll adjustments. It has, however, stipulated that if the matter is submitted for arbitration, the arbitrators shall be guided by the need to ensure that the franchisee is reasonably but not excessively remunerated, having regard to, *inter alia*, any material change in the economic conditions of Hong Kong

since the enactment of the legislation, or since the tolls were last determined.

6. Some members of the Panel on Transport have earlier suggested that the toll adjustment mechanisms of WHC and Route 3 should be amended. In this regard, it is important to note that the current toll adjustment mechanisms of WHC and Route 3 were devised in the 1990s. They are enshrined in the relevant legislation and form part of the agreements between the Government and the concerned franchisees. Hence, they cannot be changed unilaterally by the Government.

7. When considering the application of public-private-partnership for future transport infrastructure projects, we will give due regard to the following issues: -

- (a) how the commercial risk of capital investment in an infrastructure project between the public and private sectors should be shared;
- (b) how more flexibility could be built into the public-private-partnership arrangement so as to better cope with the changing circumstances over the contractual period; and
- (c) how we can ensure that the infrastructure project can achieve its intended transport objective.

## **ROAD HARBOUR CROSSINGS**

8. The Government attaches great importance to rationalising the utilisation of the three road harbour crossings. Due to the differences in their locations and toll levels, the distribution of traffic among the three road harbour crossings, i.e. Cross-Harbour Tunnel (CHT), EHC and WHC, is uneven. In particular, we consider that there is room for considering diverting more traffic away from the congested CHT to WHC. Over the past few years, we have been exploring with the WHC franchisee possible measures to help enhance accessibility to WHC. Those include constructing new road links to WHC, smoothing traffic flow at nearby road junctions, and providing road markings and additional directional signs to guide motorists to WHC.

9. In April this year, we presented to the Panel on Transport 12 possible options that may improve the distribution of traffic among the three road harbour crossings. Having examined the options and listened to views expressed by different quarters, we have formulated some initial views on the feasibility and desirability of those options. These are set out below.

### **Group 1 – Toll-Related Measures**

#### *Option 1A: Overall Increase in CHT Tolls*

10. We believe that while upward toll adjustments at CHT would be most effective in diverting traffic to WHC and EHC, and there are some supporters for this option, there could be considerable objection from the users, and this option would unlikely be the preferred option of the public at large.

#### *Option 1B: Peak Hour Surcharge at CHT*

11. This option has less impact on the users than a full-fledged toll increase at CHT. However, since CHT is already operating beyond its capacity and there is congestion most of the time from 8 am to 10 pm, there is little scope to further differentiate peak hours from non-peak hours in the daytime.

#### *Option 1C: Surcharge and Rebate at CHT*

12. We have examined this in considerable detail but consider that the associated logistical and accounting arrangements could be extremely complicated. Together with the possibility of trading of the coupons, which would reduce the option's traffic benefits, we have reservations over its likely effectiveness.

#### *Option 1D: Variable Toll Adjustment System at CHT*

13. This is essentially a flexible toll adjustment mechanism that seeks to adjust the toll of CHT at regular intervals of, say, 6-12 months, following a set of agreed indicators like queue lengths, CHT throughput, etc. We are concerned about the uncertainty this option would bring about, and would consider this only if other options do not work.

#### *Option 1E: Toll Increase at CHT & Toll Reduction at WHC/EHC*

14. We consider that this option, which is to rationalise the tolls of the three crossings, should be a more direct and effective way to improve

their traffic distribution and reduce congestion at CHT. We are actively working on this option.

## **Group 2 – Franchise-Related Measures**

### *Option 2A: Buying out the Franchises of WHC/EHC*

15. We are not in favour of this option, partly because it would involve substantial funding from the public coffer, and partly because it goes against our cardinal principle of “big market, small government”.

### *Option 2B: Selling CHT to the Franchisees of WHC/EHC*

### *Option 2C: Common Ownership for CHT, WHC and EHC*

16. We are not particularly optimistic about these two options, as both of them would involve complex legal, financial and organisational issues, which require protracted discussion with the franchisees. In particular, it would be most difficult to reach agreement on the valuation of the tunnels.

### *Option 2D: Extension of Franchises of WHC and EHC*

17. The idea of franchise extension to “compensate” the franchisees for their loss in revenue resultant from toll adjustments is worth further consideration. However, it would be necessary to work out carefully the duration of the franchise extension so as to ensure fairness to the franchisees, the tunnel users and the Government.

## **Group 3 – Other Measures**

### *Option 3A: Building a Fourth Tunnel or Expanding the Capacity of CHT*

18. The option of building the fourth tunnel or expanding the capacity of CHT are possible long-term solutions. However, we need to examine various technical issues, as well as the land requirements for the ingress/egress and connecting roads. Accordingly, this option would not help alleviate the traffic problem in the short to medium term.

### *Option 3B: Restricting the Use of CHT*

19. Restrictive measures, such as restricting certain types of vehicles from using CHT during peak hours, or restricting vehicles with odd/even licence plates from using CHT on certain days of a week, will limit motorists’ options and cause considerable inconvenience. The community at large may not react to this option positively. Also, enforcement may not be easy. We would only consider this option if other

options do not work.

### Option 3C: Enhancement of Ferry Services

20. Enhancement of ferry services is the easiest to implement, as the infrastructure are already available. It offers an additional option to motorists, and there would unlikely be negative impacts on members of the public. However, given their inherent constraints and operational difficulties, we doubt if there would be strong commercial interest in operating such services, particularly vehicular ferry services. Therefore, the scope for using ferry services to relieve pressure on the three road harbour crossings should be very limited.

21. Having gone through all the options, we consider that a combination of franchise extension and toll rationalisation is worth further consideration. Over the past few months, we have been actively discussing this option with the franchisees of EHC and WHC. Nevertheless, we wish to reiterate the point that any arrangement to be agreed must be able to bring about overall benefit to the public, must be fair to taxpayers and must help to alleviate traffic congestion in the tunnels and on the adjacent roads and junctions.

## **ROUTE 3**

22. Apart from the road harbour crossings, we are also discussing with the franchisee of Route 3 possible measures to rationalise the utilisation of Route 3 and the alternative, non-tolled routes. In addition, we have been encouraging the franchisee to offer more concessions to more vehicle types. We maintain an open mind in regard to the possibilities and will continue the discussion.

## **WAY FORWARD**

23. We will continue to discuss actively with the relevant franchisees, with a view to reaching an agreement that would be beneficial to the public, fair to taxpayers and able to tackle the traffic problems.

Environment, Transport and Works Bureau  
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