

For Information

Public Works Subcommittee of Finance Committee

Panel on Transport and Panel on Planning, Lands and Works

Route 10 – North Lantau to Yuen Long Highway

Purpose

This paper provides Members with further information regarding the project Route 10 – North Lantau to Yuen Long Highway.

Background

2. We submitted discussion paper PWSC(1999-2000)67 on 519TH ‘Route 10 – North Lantau to Yuen Long Highway’ on 3 November 1999, and further discussion was held at the joint meeting of the Panel on Transport and the Panel on Planning, Lands and Works on 12 November 1999. Members of the Panels requested that the following information should be provided -

- (a) to confirm the estimated population at Tai Lam Chung and Tsing Lung Tau taking into account the likely potential development in the areas;
- (b) to provide more information on adopting “Engineer’s Design” for procurement of Tsing Lung Bridge in lieu of “Design and Build”;
- (c) to provide statistics for the contract disputes for the Airport Core Programme (ACP) projects;
- (d) to provide a detailed programme for the 26 months required for Roads (Works, Use and Compensation) Ordinance and land resumption procedures; and

- (e) to give information regarding the width of the Ma Wan navigation channel and the forecast traffic volumes and estimated accident statistics at the location.

Estimated Population in Tai Lam Chung and Tsing Lung Tau

3. The total existing population in Tai Lam Chung and Tsing Lung Tau is about 16,000. The estimated forecast population in this area as mentioned at the joint panel meeting (about 17,700 in 2006, 21,300 in 2011 and 22,700 in 2016) is based on information provided by the Planning Department. According to the latest Outline Zoning Plan of the area, potential areas for future residential development are mainly located in So Kwun Wat and Sham Tseng and therefore the population growth in Tai Lam Chung and Tsing Lung Tau would not be significant.

Procurement of Tsing Lung Bridge: “Engineer’s Design” versus “Design and Build”

4. The minimum contract period for Tsing Lung Bridge (TLB) based on a Design and Build (D&B) form of contract is estimated to be 5¾ years. The time required from now to complete the statutory and administrative procedures in terms of Roads (Works, Use and Compensation) Ordinance, land acquisition and the funding application process dictates that the contract cannot be awarded before April 2002. This means that a D&B contract can only be completed by the end of 2007, which is later than the currently proposed “Engineer’s Design” approach.

5. The D&B option gives the Contractor a free choice on the type of structure, its costs, its materials and its appearance. As a result of this freedom and due to the competitiveness of the bidding for this type of contract, there may be considerable incentive for the Contractor to propose innovative designs. However, TLB is tightly constrained by physical conditions such as aviation and navigational clearances. Furthermore, the Environmental Permit (EP) obtained under the EIAO prior to the contract award would need to be based on a preliminary design and any variation that might materially adversely affect the

environmental impact, as may be possible in the Contractor's detailed design, would require a variation to the EP. Consequently, there may be time implications for obtaining such an amended EP before commencement of the works on site. From the point of view of the design, a D&B contract provides greater opportunity for the contractor to skimp on the design which the Administration may not be able to control.

6. We already have the good example of success of the ACP, the majority of which contracts (particularly the Tsing Ma Bridge contract) were based on the Engineer's design approach and we do not consider it desirable to introduce uncertainties by using a different procurement method.

Contract Disputes

7. We do not consider statistics on contract disputes on ACP contracts is relevant to the question of whether the Design and Build (D&B) method of procurement will lead to more contractual disputes, as the vast majority of ACP projects were designed by Government employed consulting engineers and procured through construct only contracts. Moreover, some of the ACP contract disputes are still in the process of resolution and it may be misleading to quote these figures at this stage. Based on the experience from the ACP projects, there is more confidence in an "Engineer's Design" approach.

Project Programme

8. A detailed programme for the gazetting under the Roads (Works, Use and Compensation) Ordinance and land resumption procedures which illustrates all the critical paths is at the Annex for Members' information.

Width of Ma Wan Channel, Forecast Traffic Volumes and Estimated Accident Statistics

9. A comprehensive marine impact assessment (MIA) has been carried out covering the potential marine related issues associated with the construction and operational stages of the Tsing Lung Bridge. The MIA report has been endorsed by the Marine Department.

10. At the location of the proposed bridge, the Ma Wan navigational channel width is 1100m.

11. The current daily movements and the forecast daily movements for 2006 and 2011 across the Ma Wan Navigational Channel, at the location of the bridge, are summarised below -

Vessel Class	No. of Vessels/day		
	Existing	2006	2011
Ocean Going	25	87	98
Dangerous Goods	14	52	84
Rivertrade	290	365	378
Midstream	47	84	84
Ferries	325	365	386
Fishing, Launches and Service Crafts	275	268	294
Total	976	1221	1324

12. The forecast incident level in 2006 for ship to ship both underway is approximately 1.15 incidents per km² per year for the Study Area. This incident rate is well below that recorded for parts of Victoria Harbour during 1994 (2.0 incidents per km² per year) which has been adopted as the acceptable limit.

13. Our currently proposed Tsing Lung Bridge towers are sited outside the navigational channel in order not to interfere with vessel movements and will be protected from accidental ship impact by an appropriately designed seawall. If an interchange between Route 10 and Tuen Mun Road is to be provided at Tsing Lung Tau, the tower will need to be shifted towards the sea affecting the navigational channel.

Advice Sought

14. Members are requested to note the content of this paper.

**Transport Bureau
November 1999**

Act. ID	Description	Duration	Start	Finish	1999				2000				2001				2002			
					Q1	Q2	Q3	Q4												
ROADS ORDINANCE AND LAND RESUMPTION PROCESS																				
根據道路條例將計劃呈交行政會議及收地事宜的過程																				
RO030	Circulate and finalise scheme 傳閱及落實計劃	8.5 w (星期)	20.01.2000	19.03.2000																
RO040	Gazette Scheme 將計劃刊登憲報	0	20.03.2000	-																
RO050	Objection Period 提出反對期	8.5 w (星期)	20.03.2000	19.05.2000																
RO060	Resolve objections and submit EXCO Paper 解決反對及提交行政會議文件	39 w (星期)	20.05.2000	19.02.2001																
RO070	Authorize Scheme 批准計劃	0	-	26.03.2001																
RO080	DLO prepare resumption submission 地政處擬備收地呈審文件	4.5 w (星期)	27.03.2001	26.04.2001																
RO090	LD / HQ process resumption submission 地政總署總部處理收地呈審文件	4.5 w (星期)	27.04.2001	28.05.2001																
RO100	LD order land resumption 地政總署指令收地	0	29.05.2001	-																
RO110	LD gazette land resumption 地政總署將收地事宜刊登憲報	0	01.06.2001	-																
RO120	Land gazette period 將土地事宜刊登憲報期	4.5 w (星期)	01.06.2001	02.07.2001																
RO130	Land Resumption Notice Period 收地通知期	13.5 w (星期)	03.07.2001	04.10.2001																
RO140	Land reversion date (Lantau to Tsing Lung Tau) 歸還土地日期(大嶼山至青龍頭)	0	05.10.2001	-																
RO150	Clearance (Lantau to Tsing Lung Tau) 清拆(大嶼山至青龍頭)	25 w (星期)	05.10.2001	28.03.2002																
RO160	Start of Construction 開始施工	0	29.03.2002	-																
Start Date	20.01.2000	<p style="text-align: center;">Implementation Programme on Land Issues Route 10 - North Lantau to Yuen Long Highway (Southern Section)</p> <p style="text-align: center;">有關土地事宜的施工程序表 十號幹線 - 北大嶼山至元朗公路 (南段)</p>																		
開工日期																				
Finish Date	28.03.2002																			
完工日期																				
Page Number	1A																			
頁碼																				