

For Information

File Ref : ETWB(T)CR 1/4661/00

Legislative Council Panel on Transport

The Hong Kong – Zhuhai – Macao Bridge (“the Bridge”)

PURPOSE

This paper provides Members with supplementary information on the justification for the Bridge and the location of its landing point in North West Lantau.

BACKGROUND

2. At the meeting of the LegCo Panel on Transport held on 29 September 2003, we briefed Members on the latest progress of the arrangements for taking forward the advance work for the Bridge and sought Members’ support for a funding application to be made to the Public Works Subcommittee and the Finance Committee of this Council for an investigation and preliminary design study. We also undertook to provide more information on the justification for the Bridge project and the location of its landing point in North West Lantau.

THE STRATEGIC VALUE OF THE BRIDGE

3. The study on “Transport Linkage between Hong Kong and Pearl

River West” (PRW) commissioned by the National Development and Reform Commission (NDRC) and the Hong Kong Special Administrative Region Government (HKSARG) has concluded that there is an urgent need for a land transport link connecting Hong Kong, Zhuhai and Macao. Such a link would be of significant strategic value for the following reasons:

(a) More direct connection with the west bank of the Pearl River Delta (PRD)

At present, all our road-based transport links with the Mainland (via Sha Tau Kok, Man Kam To, Lok Ma Chau and the future Hong Kong Shenzhen Western Corridor (HK-SWC)) are routed through the northern part of the territory, connecting Hong Kong to the east bank of the PRD. There is an obvious missing link between Hong Kong and the west bank of PRD. Traffic between Hong Kong and the west bank of PRD must detour to the north via Shenzhen and Humen Bridge which is reaching saturation. The Bridge will provide a more direct link in the future.

(b) Emerging opportunities in the West Bank

The Mainland’s accession to the World Trade Organization, and the implementation of the Closer Economic Partnership Arrangement with Hong Kong have opened up immense investment opportunities. To date, the level of economic activity in the west bank still lags behind that of the east bank, and the labour and land costs there are lower. A much more rapid development pace can be envisaged for the west bank in

the years ahead. A more direct land transport link with the west bank would enable Hong Kong to tap the potential of the area, capitalise on its lower land and labour cost, and provide an opportunity for the enterprises in Hong Kong to invest and expand. In addition, the Bridge would also provide a more direct route to the inner provinces in the southwest leading to more investment opportunities.

(c) Drastic cut in transport cost and traveling time

The Bridge would greatly reduce the distance and traveling time and hence transport cost between Hong Kong and the west bank of the PRD. For example, it has been estimated that the land distance and traveling time between the city centre of Zhuhai and Hong Kong will be reduced by some 50% and 70% respectively. This would be beneficial to our trucking industry.

(d) Reinforcing Hong Kong's status as an international shipping and aviation centre

The Bridge would bring new cargo sources to our Port and the Hong Kong International Airport, and open up a potentially significant source of passengers for the Airport. It will also enable the Airport to develop multi-modal transport links with the Mainland, in particular the west of PRD, to enhance its passenger and cargo link functions.

(e) Promotion of regional tourism

The Bridge would enable Hong Kong, Zhuhai and Macao to

pool their resources (for example Disneyland in Hong Kong, the gaming industry in Macao and the garden city appeal of Zhuhai) together to promote regional tourism and to enhance the region's competitiveness.

CHOICE OF THE LOCATION FOR THE LANDING POINT OF THE BRIDGE IN HONG KONG

4. Geographically, the Bridge has to land in the western part of Hong Kong. The possible sites for landing can be grouped into three main areas :-

- (a) Tuen Mun West
- (b) South West Lantau
- (c) North West Lantau

Tuen Mun West

5. Different potential locations for landing in Tuen Mun were assessed in Planning Department's Crosslinks Study in 1996 in response to Zhuhai Government's proposal to connect the city with Hong Kong via a land transport link. The study concluded that within Tuen Mun West, Black Point was a preferred landing point. However, the study had not compared Tuen Mun's relative merits and demerits with other parts of the territory.

6. We subsequently compared various options and ruled out Tuen Mun West as a landing point for the bridge for the following reasons :-

- (a) of the three possible areas, Tuen Mun West is the furthest away from Macao, hence resulting in the longest Bridge;
- (b) Tuen Mun West is close to the HK-SWC and would result in the Bridge duplicating the functions of the HK-SWC to a large extent;
- (c) most of the existing and planned strategic facilities such as the Airport and the Disneyland are located in North Lantau;
- (d) the traffic impact of the Bridge on the local network in Tuen Mun would be severe, bearing in mind that the area would already be taking in additional traffic from HK-SWC. Substantial investment on new connection infrastructure would be necessary in the early stage; and
- (e) a landing point in Black Point would affect the feeding area of a comparatively denser population of Chinese White Dolphin.

South West Lantau

7. Landing at South West Lantau would give the most direct access to Zhuhai and Macao but it has also been ruled out for the following reasons :-

- (a) the waters off South West Lantau is frequented by Chinese White Dolphins and is an important habitat for the species. There is also a plan to designate the area as a Marine Park;

- (b) landing at South West Lantau would result in adverse impact on the proposed Marine Park and the ecologically sensitive sites in the area. Encroachment into the Lantau South Country Park will also be a serious problem; and
- (c) very lengthy new connecting roads would be required to connect the Bridge to the existing road network in North Lantau. Moreover, most of the new connecting roads would need to be in tunnel resulting in substantial construction and maintenance costs as well as a longer construction time.

North West Lantau

8. Comparatively speaking, North West Lantau has the following advantages :-

- (a) the proposed landing points are in closer proximity to the Hong Kong International Airport and the future Hong Kong Disneyland, and can bring cross boundary traffic directly to these destinations through a shorter connecting infrastructure;
- (b) a landing point at North West Lantau is found to have comparatively less environmental impact; and
- (c) the existing road network can cope with the additional traffic generated by the Bridge when it opens. The network can also be improved incrementally in the longer term as traffic builds up.

POTENTIAL TRAFFIC IMPACT

9. According to the forecasts in the Study on the “Transport Linkage between Hong Kong and Pearl River West”, the passenger flow and freight demand of the Bridge in 2010 is 33 – 41 million passengers, 1.7 – 2.6 million TEUs, and 1.1 – 1.9 million tonnes break-bulk cargo.

10. It is difficult at this stage to translate the passenger flow and freight demand into vehicular traffic. Much would depend on the assumptions, such as the tolling structure and the vehicular regulation system, all of which are uncertain at this stage. Nevertheless, purely for reference purpose, we have undertaken a very crude conversion exercise, which points to daily vehicular traffic in the range of 12000 to 16000 in 2010. It is anticipated that our receiving road network including North Lantau Highway and Lantau Link can adequately handle this amount of traffic from the Bridge. This would be further examined in the coming Traffic Impact Assessment study under the investigation and preliminary design study for the Bridge.

ENVIRONMENTAL IMPACT

11. The impact will be carefully assessed as part of Highways Department’s investigation and preliminary design study. We have also sought the initial views of the Advisory Council on the Environment and some interested green groups. They generally agree that of the three landing points, North West Lantau should result in the least impact on the environment and that a full Environmental Impact Assessment (EIA) should be conducted for the proposed landing point in North West Lantau

to further assess the impact and to propose the necessary mitigation measures.

RELEVANT STUDIES

12. Consultancy reports commissioned by the HKSARG in relation to the Bridge are:-

- (i) Transport linkage between Hong Kong and Pearl River West;
and
- (ii) Hong Kong-Pearl River West Link, Preliminary Environmental Review 2002.

13. The study on “Transport Linkage between Hong Kong and Pearl River West”, jointly commissioned by NDRC and HKSARG, made reference to a list of studies and documents which is set out at Annex A. The findings of the “Hong Kong – Pearl River West Link - Preliminary Environmental Review 2002” will be reviewed and where appropriate incorporated into the coming EIA Study which will be opened to the public for inspection.

Environment, Transport and Works Bureau

21 October 2003

参考文献

1. Michael J. Enright、Edith E. Scott、David Dodwell:《香港优势》，牛津大学出版社，1997年。
2. Michael J. Enright、张家敏、Edith E. Scott、朱文辉:《香港与珠江三角洲经济互动》，2003年1月。
3. 澳门发展政策研究中心:《开创港澳经济关系新纪元-研讨会论文专辑》，1999年8月。
4. 澳门发展政策研究中心:《新时期港澳经济关系专题研究》，1999年6月。
5. 澳门特别行政区政府统计暨普查局:《对外贸易统计出口2001》，2002年4月。
6. 澳门特别行政区政府统计暨普查局:《对外贸易统计进口2001》，2002年4月。
7. 澳门特别行政区政府统计暨普查局:《统计年鉴2001》，2002年7月。
8. 曹钟勇:《城市交通论》，中国铁道出版社，1996年版。
9. 陈广汉、郑宇硕、周运源:《区域经济整合:模式、策略与可持续发展》，中山大学出版社，2002年8月。
10. 陈建军:《产业区域转移与东扩西进战略-理论和实证分析》，中华书局，2002年11月。
11. 段樵、任凤仪:《成就一个圆，自都会聚集经济角度探讨香港珠三角地区持续发展》，2003年4月。
12. 港澳经济年鉴编辑部:《港澳经济年鉴》，港澳经济年鉴社，2000年、2001年。
13. 管楚度:《新视域运输经济学》，人民交通出版社，2001年版。
14. 广东港澳经济研究会、澳门经济研究会:《澳门经济发展的若干政策》，1997年2月。
15. 广东省发展计划委员会:“珠江三角洲率先基本实现现代化规划及各专题规划”，2003年6月。
16. 广东省各地市人民政府:“广东省各地市国民经济和社会发展第十个五年计划纲要”，2001年。
17. 广东省各地市统计局:“各地市2001年、2002年国民经济和社会发展统计公报”。
18. 广东省人民政府:《广东省“十五”各行业规划》，2001年。
19. 广东省人民政府:《广东省综合运输体系“十五”计划的通知》，2001年8月。
20. 广东省统计局:《广东统计年鉴》，中国统计出版社，1995年-2002年。

21. 广州市发展计划委员会：《走向现代化的广州-广州市国民经济和社会发展“十五”计划汇编》，广东经济出版社，2002年2月版。
22. 国家发展和改革委员会基础产业司：《国民经济和社会发展第十个五年计划综合交通体系发展重点专项规划》，2001年。
23. 国家发展和改革委员会综合运输研究所：《2000-2020年全国运输总需求及各种运输方式分担比例研究》，2000年5月。
24. 国家发展和改革委员会综合运输研究所：《90年代广东省交通运输发展问题研究》，1995年。
25. 国家发展和改革委员会综合运输研究所：《长江三角洲上海市和江苏省、浙江省交通发展研究》，1997年。
26. 国家发展和改革委员会综合运输研究所：《广州市综合交通规划研究》，1992年。
27. 国家发展和改革委员会综合运输研究所：《加快西部开发铁路发展规划研究》，2001年11月。
28. 国家发展和改革委员会综合运输研究所：《西部地区综合运输体系建设研究》，2000年12月。
29. 国家发展和改革委员会综合运输研究所：《西南和华南部分省区区域综合交通规划研究》，1993年6月。
30. 国家发展和改革委员会综合运输研究所：《香港与内地陆路运输大通道的现状与发展》，1997年11月。
31. 国家统计局：《中国统计年鉴》，中国统计出版社，1995-2002年。
32. 国世平：《迈向21世纪的澳门经济》，人民出版社，2000年12月。
33. 海南、广西等省、区人民政府：“国民经济和社会发展第十个五年计划纲要”及“十五”各行业规划，2001年。
34. 黄汉强：《澳门的经济》，新华出版社，1999年8月。
35. 李继古、彭璧玉：《21世纪中国地缘经济战略-华南经济圈研究》，中国经济出版社，2001年10月。
36. 路平：《跨世纪的广东现代化探索》，广东高等教育出版社，2000年8月。
37. 丘梓岐：《深圳、香港道路建设与管理研究》，人民交通出版社，1999年版。
38. 荣朝和：《论运输化》，中国社会科学出版社，1993年版。
39. 荣朝和：《西方运输经济学》，经济科学出版社，2002年版。
40. 司徒锦裕：《中国入世后珠三角外资和外贸的发展趋势及华南集装箱运输格局的变化》，Shippers Today, 2003年。
41. 宋子和、罗行政、廖月晖：《“珠三角”跨世纪经济国际化探索》，广东高等教育出版社，1999年1月。
42. 吴楚材、张落成、季子修：《中国沿海经济低谷地区的崛起》，中国科学技术大学出版社，2002年9月。

43. 香港港口及航运局、规划署、海事处:《2001 年港口发展策略检讨》, 2001 年 9 月。
44. 香港港口及航运局:《2001 年统计年报》。
45. 香港港口及航运局:《巩固香港作为国际和地区首选运输及物流枢纽的研究》, 2001 年。
46. 香港港口及航运局:《香港港口运输统计摘要》, 2002 年 8 月。
47. 香港海事处:《香港统计数字一覽》, 1999 年、2000 年、2001 年、2002 年。
48. 香港特别行政区运输局:《迈步向前》, 1999 年 10 月。
49. 香港机场管理局:《全年最杰出货运机场—香港国际机场》, 2001 年。
50. 香港机场管理局:《香港国际机场国际民航交通量》, 2000 年、2001 年。
51. 香港贸易发展局研究部:《连系大珠三角》, 2003 年 1 月。
52. 香港生产力促进局:《珠三角现代产业》, 2003 年 1 月。
53. 香港特别行政区规划署:《跨界旅运统计调查摘要》, 2000 年 7 月。
54. 香港特别行政区规划署:《南来北往—根据 2001 年跨界旅运统计调查有关来往内地及香港的旅运模式》, 2001 年。
55. 香港特别行政区运输局:《铁路发展策略 2000》, 2000 年 5 月。
56. 许庆斌, 荣朝和, 马运等:《运输经济学导论》, 中国铁道出版社 1995 年版。
57. 杨英:《香港经济新论》, 暨南大学出版社, 2002 年 6 月。
58. 一国两制研究中心:《粤港澳大桥综合协调方案》, 2002 年 9 月 12 日。
59. 一国两制研究中心:《粤港澳大桥背景资料 – 共识与分歧》, 2002 年 9 月。
60. 一国两制研究中心:《港深两地公路货运流通问题》, 1994 年 3 月。。
61. 郑天祥, 李郁:《粤港澳经济关系》, 中山大学出版社, 2001 年 8 月。
62. 中国国际工程咨询公司、国家发展和改革委员会综合运输研究所:《加快深港西部信道建设的研究》, 1995 年 6 月。
63. 中国交通年鉴社:《中国交通年鉴》, 中国交通年鉴社, 1995-2001 年。
64. 钟坚:《深圳与香港经济合作关系研究》, 人民出版社, 2001 年 5 月。
65. 周天麟:《深圳港口发展及其与周边港口的关系》, Shippers Today, 2003 年。