

## **LEGISLATIVE COUNCIL BRIEF**

### **WAY FORWARD FOR THE SHEUNG SHUI TO LOK MA CHAU SPUR LINE**

#### **INTRODUCTION**

At the meeting of the Executive Council on 18 September 2001, the Council ADVISED and the Chief Executive ORDERED that -

- (a) the Kowloon-Canton Railway Corporation's proposed tunnel option for the Spur Line project should be accepted as the way forward;
- (b) the proposed implementation programme should be endorsed in principle; and
- (c) the necessary amendments to the railway scheme should be gazetted under the Railways Ordinance.

#### **BACKGROUND AND ARGUMENT**

2. In September 1998, the Executive Council (ExCo) decided that the Kowloon-Canton Railway Corporation (KCRC) should be invited to submit a detailed proposal for the implementation of the Spur Line project. KCRC submitted its proposal to Government in March 1999. In June 1999, ExCo decided to ask KCRC to proceed with the detailed planning and design of the Spur Line. The 7.4-km Spur Line, including 700 metres over Long Valley, was originally targeted for completion in 2004. The KCRC proposed to build and operate the Spur Line wholly from its internal resources and borrowing.

3. KCRC consulted the relevant parties including the then North and Yuen Long Provisional District Boards, the EIA Sub-Committee of the Advisory Council on the Environment (ACE) and the Town Planning Board on the Spur Line project from July to September 1999. The Spur Line was subsequently gazetted under the Railways Ordinance in October 1999. 74 objections have been lodged against the scheme, of which 12 have been withdrawn to date.

4. The statutory EIA process for the Spur Line which is a designated project under the EIA Ordinance commenced in December 1998 when KCRC submitted the project profile to the Director of Environmental Protection (DEP). Following the issue of a Study Brief by DEP in February 1999, KCRC submitted an EIA report to DEP in April 2000. On 16 October 2000, DEP decided not to approve the EIA report and not to issue an Environmental Permit for the Spur Line. The major reasons for the rejection of the EIA report and for the refusal to issue an Environmental Permit are as follows -

- (a) Long Valley is an area of high ecological value with a high diversity of birds. The project is likely to cause serious fragmentation, significant disturbance and habitat destruction during the construction stage;
- (b) there is likely to be adverse environmental impact arising from the construction of the Spur Line;
- (c) the proposed temporary wetland is unlikely to compensate adequately for habitat loss during the construction stage of the Project;
- (d) DEP was not satisfied that all alternative means of achieving the purpose of the Project had been explored and all practicable attempts to avoid the heart of Long Valley had been made; and
- (e) the cumulative impact of the Project together with other existing, committed and planned projects had not been properly addressed.

5. On 10 November 2000, KCRC lodged an appeal to the Appeal Board against DEP's decision not to approve the EIA report and not to issue an Environmental Permit for the Spur Line project. Having heard the case for 27 days between April and June 2001, the Appeal Board dismissed the two

appeals by KCRC on 30 July 2001, principally on the ground that KCRC had provided major new proposals during the hearing which should have been confirmed and assessed as part of the EIA study.

## **ALTERNATIVE OPTIONS**

6. In its judgement, the Appeal Board recognized that it is government policy to implement the Spur Line. The Board suggested that in considering whether an alternative was 'practical and reasonable', apart from environmental acceptability, other factors that should be considered included engineering constraints, extra-time involved, additional cost and government policy. On this basis, the Appeal Board considered that there were three possible alternatives -

- (a) the viaduct as proposed, based on the Central Alignment through Long Valley;
- (b) the bored tunnel following the same Central Alignment through Long Valley; and
- (c) the Northern Link (NOL)

The Central Alignment is the gazetted alignment which was proposed by KCRC. A map showing the Central Alignment of the Spur Line and the NOL is at **Annex A**.

A

### **Viaduct**

7. While the Appeal Board believed that the viaduct option might have merit and its adverse impact might be mitigated with the expertise and long-term financial commitment available, both DEP and KCRC are of the view that it takes a protracted time to prove the environmental acceptability of the viaduct option.

### **Northern Link**

8. The Northern Link (NOL) as recommended in Railway Development Strategy 2000 will connect West Rail at Kam Sheung Road station to the boundary crossing at Lok Ma Chau and the Spur Line at Kwu Tung. It is called the "Northern Link" because, when completed together with the Spur Line, East Rail and West Rail will be linked up at northern New Territories.

9. The Appeal Board was aware that implementing NOL in lieu of the Spur Line would require a major change of government policy, even if it were possible to implement NOL in a timely fashion. The NOL is designed as a long-term complement to, but not a replacement of, the Spur Line project. Even if NOL is constructed first, the Spur Line is still required to provide the strategic linkage of East Rail and West Rail in the northern part of the New Territories. Furthermore, building the NOL would take at least seven to eight years as the project is only at the conceptual stage.

### **Other Alternatives**

10. We have revisited all the other Spur Line alternative alignments considered previously. Save for the tunnel option, the problems associated with these alignments remain prohibitive in terms of programme, cost, impact on the local community and environmental impact.

### **Bored Tunnel**

11. KCRC has undertaken an in-depth conceptual study of a bored tunnel option based on the Central Alignment. This involves replacing the viaduct section of the proposed Spur Line in Long Valley with a bored tunnel approximately 4 km long, running from north of Sheung Shui station to Chau Tau, including the provision for an underground station at Kwu Tung. A plan showing the alignment for the tunnel is at **Annex B**. The Corporation has looked at various aspects, including engineering feasibility, environmental impact, programme and cost, and considers that the bored tunnel option is practicable from both construction and operation points of view.

B

12. The assessment is set out below.

## **DETAILED ASSESSMENT OF THE TUNNEL OPTION**

### **(A) Engineering Feasibility**

13. KCRC has undertaken a preliminary feasibility study of a bored tunnel scheme with the assessment of a tunnel contractor for West Rail. Both KCRC and the contractor have assessed that the geology in Long Valley is similar to that of West Rail Kwai Tsing Tunnel project (i.e. tunnel passes through both hard rock and soft ground). Although the tunnel option will involve greater construction risks than the viaduct option, KCRC believes that based on the experience gained from West Rail construction, such risks should be manageable with suitable precautionary measures. The relevant

departments have considered that, on the basis of the available information on ground conditions and the technical proposal put forward by KCRC and the contractor, there should not be any insurmountable technical problems. KCRC is conducting a more detailed assessment on engineering aspects and investigating construction interface issues. The Corporation will discuss with the relevant departments on the details of the proposal.

### **(B) Environmental Impact**

14. KCRC believes that the ecological impact on the environment should not be significant given that Long Valley is basically avoided. The Environmental Protection Department (EPD) and the Agriculture, Fisheries and Conservation Department (AFCD) are of the view that the tunnel option, as compared to the viaduct option will be more certain in its environmental acceptability and hence the EIA process can be completed much earlier.

15. KCRC is also mindful of the possible impact of a bored tunnel on the level of the water table, which may in turn affect the wetlands in Long Valley. It will study suitable measures to ensure that the water table will not be disrupted and to monitor the level closely during construction.

### **(C) Programme**

16. KCRC expects the Spur Line would open for commissioning between end 2006 and mid-2007 and will try its best to complete the project as early as possible. This is a very tight programme and all Government bureaux and departments involved will give top priority to the Project and to work together with KCRC in order to complete the Project as soon as possible.

### **(D) Cost**

17. KCRC estimates that the additional cost of constructing the Long Valley section as a bored tunnel is about \$2 billion at 2001 prices. These compare with the original estimate of \$8 billion (in 2001 prices) for the Spur Line<sup>1</sup>. KCRC has confirmed it will not need any capital injection from Government and the Spur Line will still be financially viable.

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<sup>1</sup> The original cost of the Spur Line was \$8.5 billion in Money of the Day (MOD) prices.

### **(E) Town Planning**

18. The proposed alignment will not have any adverse impact on the planning for the proposed Kwu Tung North New Development Area (NDA).

### **(F) Overall Assessment**

19. Having regard to its engineering and safety requirements, environmental, programme, land use and town planning aspects and impact on the local community, we consider that the tunnel option represents the most practical way forward for the Spur Line project.

## **FINANCIAL AND STAFFING IMPLICATIONS**

20. Based on preliminary estimates by the departments concerned, a total of 757 additional staff will be required by the Immigration Department, Customs & Excise Department, Hong Kong Police Force, Agriculture, Fisheries and Conservation Department and Department of Health upon commissioning of the Lok Ma Chau Terminal. The total cost for additional staff and other operating expenses of the immigration hall is estimated in the order of \$400 million. The level of staffing may need to increase further with growth in passenger traffic.

21. For the purpose of implementing the Spur Line project, some \$4 million in full year cost has been allocated for additional staff in the Highways Department. Lands Department has deployed some of its existing staff in the West Rail (Phase I) team to handle works related to the implementation of the Spur Line.

## **ECONOMIC IMPLICATIONS**

22. The Spur Line will enhance the efficient flow of passengers between Hong Kong and the Mainland. This will benefit the Hong Kong economy and foster a closer tie between Hong Kong and the Mainland both economically and socially.

## **ENVIRONMENTAL IMPLICATIONS**

23. The Spur Line is a designated project under the EIA Ordinance. KCRC will follow the statutory EIA process including the submission of an application for a Study Brief for the tunnel option. The whole statutory EIA process is expected to take about seven months. DEP's preliminary view is that the tunnel option does not appear to have any insurmountable environmental impacts and there would appear to be more certainty with the tunnel option and the whole EIA process could be completed much earlier with this option.

## **PUBLIC CONSULTATION**

24. We will brief the Legislative Council Panel on Transport, the ACE, relevant District Councils, rural committees and other interested parties.

## **PUBLICITY**

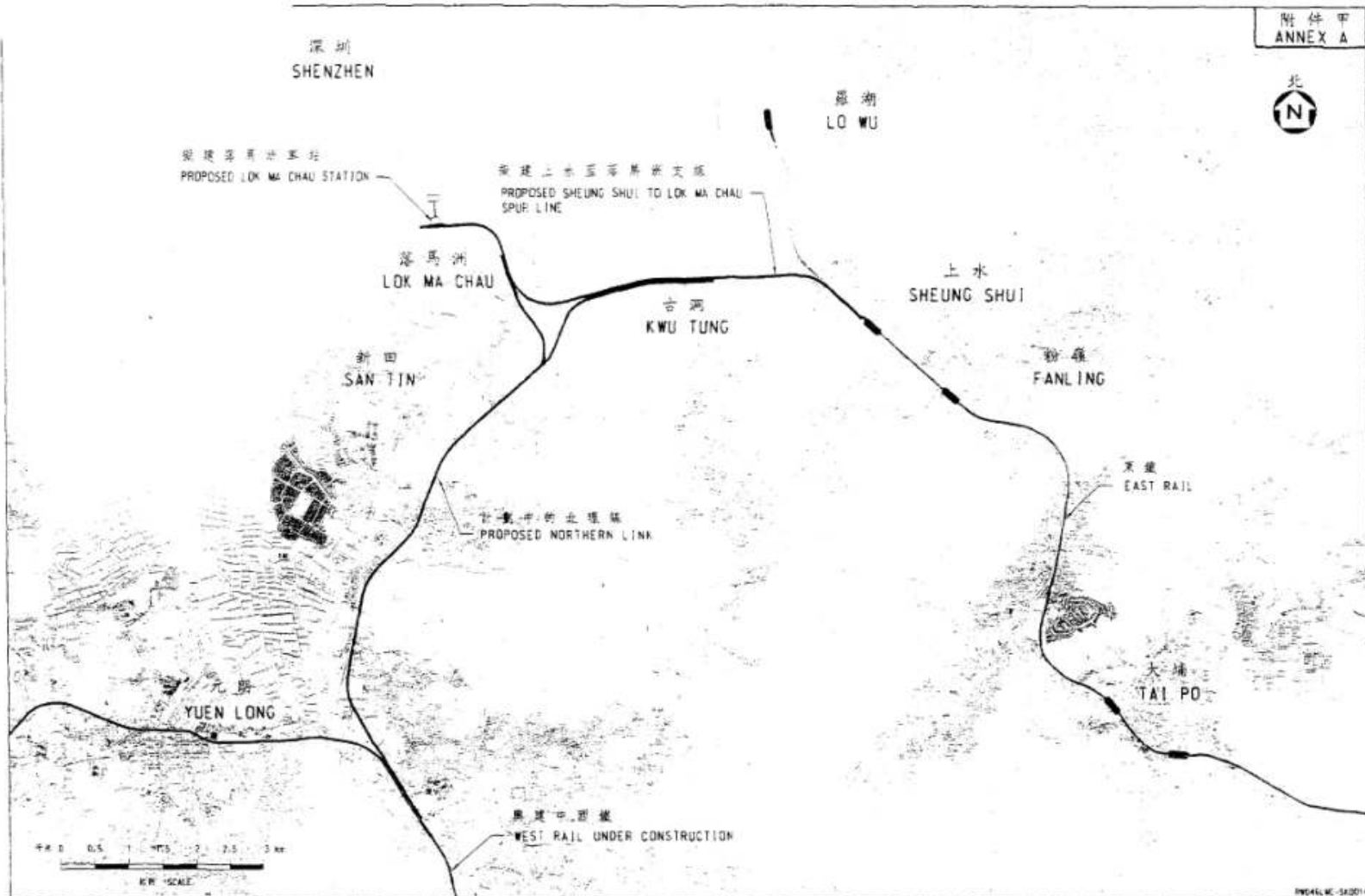
25. A press conference will be held to announce the way forward and to highlight the commitment of Government and KCRC to build the Spur Line as an environmentally acceptable infrastructure.

26. We will gazette the necessary amendments to the railway scheme of the Spur Line under the Railways Ordinance. The amendments are subject to a 60-day statutory objection period and a three-month objection handling period.

## **SUBJECT OFFICER**

27. The subject officer is Mr William Shiu, Principal Assistant Secretary for Transport (Tel: 2189 2199).

**Transport Bureau**  
**18 September 2001**  
**(TBCR 25/1016/97)**



1119 上水至落馬洲支線中央定線和北環線-路線圖  
THE SHEUNG SHUI TO LOK MA CHAU SPUR LINE CENTRAL ALIGNMENT  
AND THE NORTHERN LINK - ROUTE PLAN

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SEP 01

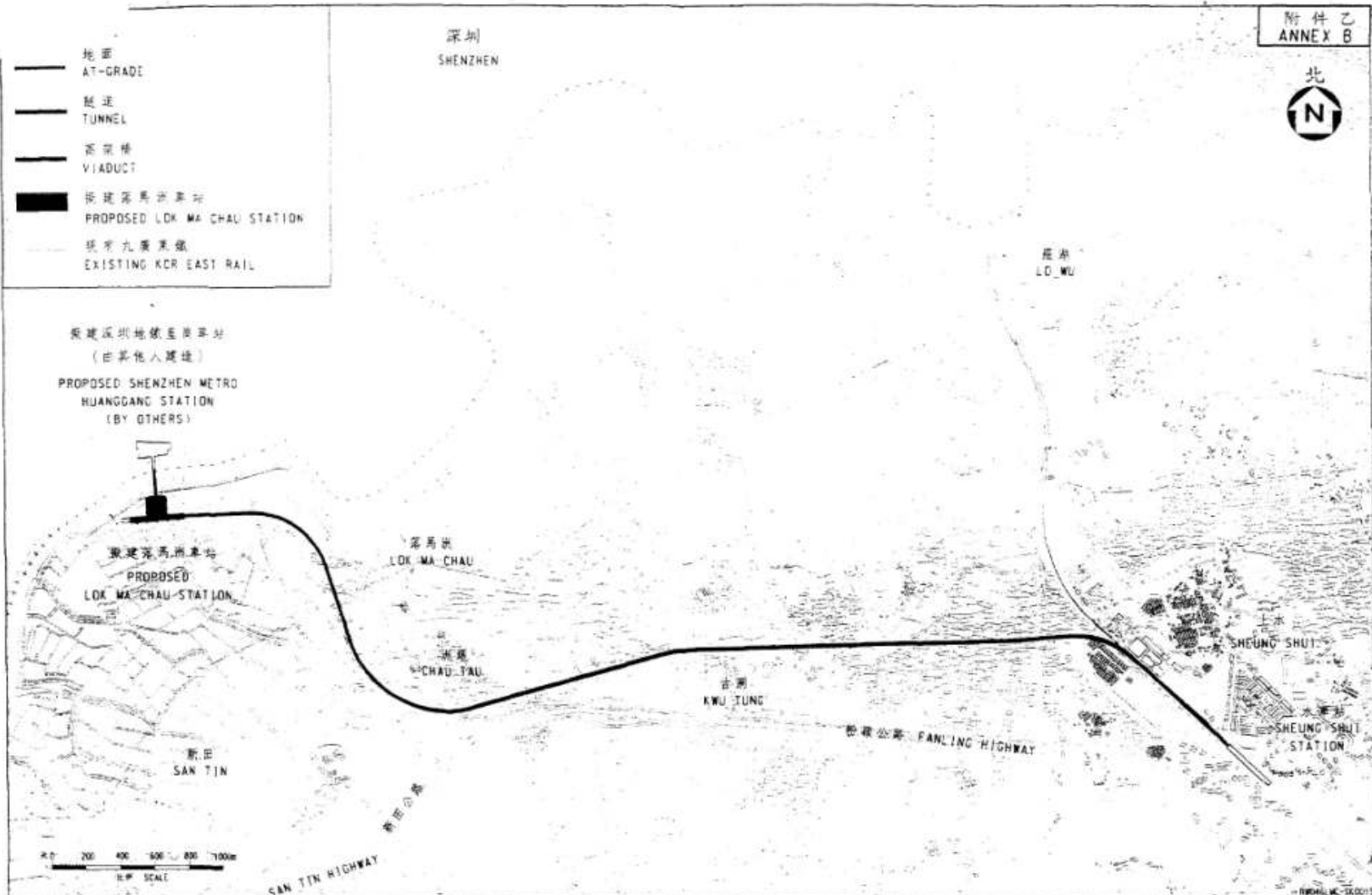
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-  地面  
AT-GRADE
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TUNNEL
-  高架橋  
VIADUCT
-  擬建落馬洲車站  
PROPOSED LOK MA CHAU STATION
-  現有九廣東鐵  
EXISTING KCR EAST RAIL



擬建深圳地鐵黃崗車站  
(由其他人興建)  
PROPOSED SHENZHEN METRO  
HUANGGANG STATION  
(BY OTHERS)

擬建落馬洲車站  
PROPOSED  
LOK MA CHAU STATION

新田  
SAN TIN

落馬洲  
LOK MA CHAU

柴灣  
CHAU TAU

古洞  
KWU TUNG

粉嶺公路  
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上水  
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11110 上水至落馬洲支線-隧道選擇方案圖  
SHEUNG SHUI TO LOK MA CHAU SPUR LINE  
-TUNNEL OPTION PLAN

DATE  
SEP 01

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