For discussion on
26 May 2000

Legislative Council Panel on Transport

Lantau North-South Road Link
between Tai Ho Wan and Mui Wo

PURPOSE

This paper briefs Members on the latest position of the project Lantau North-South Road Link between Tai Ho Wan and Mui Wo.

BACKGROUND

2. At the panel meeting on 28 July 1999, Members noted the safety and capacity problems associated with the operation of Tung Chung Road and the Administration's plan to construct a new north-south road link to replace Tung Chung Road. The proposed alignment of the new road link is at **Annex A**. Subsequent to the panel meeting, we have also issued a supplementary paper providing additional information about the project.

3. At that time, the Administration planned to submit the final Environmental Impact Assessment (EIA) Report to the Director of Environmental Protection (DEP) under the EIA Ordinance in October 1999 and gazette the project under the Roads (Works, Use and Compensation) Ordinance in January 2000 with a view to starting construction in late 2001 for completion in early 2004.

SUBSEQUENT DEVELOPMENTS

4. Highways Department (HyD) submitted the final EIA Report to DEP in November 1999. DEP subsequently informed HyD that the report did not meet the requirements of the study brief and the Technical Memorandum under the EIAO because he considered that many potentially serious adverse environmental issues have not been resolved.

5. DEP advised that the potential adverse environmental impacts include substantial habitat loss of woodland, potential adverse impact on areas of ecological significance including Tai Ho Bay and Tai Ho Stream which is a designated Site of Special Scientific Interest (SSSI) being recognised as one of the most ecologically valuable fresh water streams in Hong Kong, disturbance and loss of habitat of protected or rare species, encroachment on the Country Park and on its proposed extension, visual intrusion affecting Mui Wo and Tai Ho, and the likely combined environmental impacts arising from the construction works on the environmentally sensitive areas.

6. When we briefed the Advisory Council on the Environment (ACE) on the proposed road link in July 1999, they expressed grave concern about the environmental impact of the project. Despite our explanation that the initial EIA Report of the project concluded that the alignment would not have insurmountable environmental problems, they queried the justifications of the project, the assessment criteria of the alignment options and the residual environmental impact of the project. They also demanded a thorough consideration and environmental comparison of alternative alignments and options including the widening of Tung Chung Road. Apart from widening of Tung Chung Road, we have also considered the option of building a tunnel underneath Tung Chung Road. Our assessment of the possibility of the two options is set out below.

COMPARISON OF DIFFERENT OPTIONS

7. Back in November 1996, we had already carried out a feasibility study on the improvement of Tung Chung Road to 2-lane standard with an additional climbing lane at the uphill sections. The study found that after widening of the road along the existing alignment (on-line widening), the road would still be substandard with about 4 km length exceeding 1:10 gradient, of which 500 m would have a gradient of 1:5. Moreover, the works would affect about 10 hectares of the Country Park.

8. If the gradients are to be improved to the currently acceptable standards, a meandering alignment (off-line widening) with sharp bends across the Tung Chung valley as shown at **Annex B** may have to be adopted, which would have serious environmental impacts with about 13 hectares of natural woodland and 20 hectares of Country Park affected. The proposed

widening and improvement schemes were presented to the Country Parks Committee (CPC) under the Country and Marine Parks Board (CMPB) in March 1997. The CPC expressed concern on the impacts of the works to the Country Park, and advised other alternative north-south routes should also be considered.

9. We have also considered the option of constructing a singe tube 2-lane 2-way tunnel under Tung Chung Road. We found that the tunnel would need to be about 4 km long and the project would cost about $3 billion to construct and $80 million each year to operate and maintain. However, such a long length of single tube 2-lane 2-way tunnel would be very undesirable from the traffic safety and tunnel maintenance point of view. If a twin tube tunnel is to be built to overcome the traffic safety and tunnel maintenance problems, the project cost would increase to about $5 billion. Moreover, an interchange with South Lantau Road will need to be provided at the southern end of the tunnel and this would affect either the village area at Tong Fuk or Cheung Sha.

10. Regarding the environmental impact of the various options, the Tung Chung Road widening schemes, either on-line or off-line, will result in a greater loss of woodland than the Mui Wo – Tai Ho Wan alignment. Damage and loss of important habitat are likely to be comparable for the Tung Chung Road widening schemes and the Mui Wo – Tai Ho Wan scheme.

11. On water quality, while the Mui Wo – Tai Ho Wan scheme would have potential impact on Tai Ho Stream, widening of Tung Chung Road would also have potential impact on Tung Chung Stream. Both streams are similar in ecological character and are noted for the diverse range of fish and invertebrate species they support. However, about 1.6 km of the Tung Chung Stream will run in close proximity (less than 100 m) to the Tung Chung Road widening scheme while the Tai Ho Stream will be at least 120 m away from the Mui Wo – Tai Ho Wan scheme. Mitigation measures to prevent impact to Tai Ho Stream will be far more effective than those in protecting the Tung Chung Stream.

12. In terms of impact on the Country Park, the meandering alignments and relatively large earthworks for the off-line schemes for Tung Chung Road will result in greater impacts on the Country Park. Even the on-line scheme affects a larger area of the Country Park than the Mui Wo – Tai Ho Wan scheme.

13. On visual and landscape impact, the on-line widening of Tung Chung Road would be marginally better than the Mui Wo – Tai Ho Wan scheme. The Mui Wo – Tai Ho Wan scheme will produce slight long term visual impacts. However, the Tung Chung Road off-line widening scheme will probably be much worse due to the visual impact of the extensive slope cutting.

14. The above analysis concludes from the environmental point of view, the Mui Wo – Tai Ho Wan scheme will be comparable to the Tung Chung Road on-line widening scheme, but is better than the Tung Chung Road off-line widening scheme.

15. The tunnel option under Tung Chung Road would be able to avoid the Country Park. The areas of habitat loss and the visual and landscape impacts would also be less than the Mui Wo – Tai Ho Wan scheme. However, the area of woodland loss is similar to the Mui Wo – Tai Ho Wan scheme. The construction of the tunnel portals, associated platform for the tunnel management buildings and the approach roads to the tunnel will have direct adverse impact to the streams at either end of the tunnel, including the Tung Chung Stream. A tunnel would require ventilation and there would be high concentrations of polluted air at the two ends of the tunnel. Moreover, it is questionable whether the construction of a tunnel at such a high capital and recurrent cost is justified, letting alone the impact on the land use at Tong Fuk or Cheung Sha.

16. There will also be severe programme implications. The current programme is to complete the Mui Wo – Tai Ho Wan Link Road in 2004. However, if we pursue the Tung Chung Road on-line widening scheme, the completion date would be delayed by at least 1½ years due to the extra time needed to bid for funding, to go through the statutory procedures and to prepare the EIA Report under the EIAO. The Tung Chung off-line widening scheme or tunnel option would take another 1½ years longer to complete than the Tung Chung Road on-line widening scheme due to the need to carry out a feasibility study of the project and the

longer construction time.

17. In view of the above considerations, we conclude that the Mui Wo – Tai Ho Wan alignment remains the best option. We will proceed with this scheme and recommend extensive measures to mitigate the environmental impacts of the project and to enhance the environment as far as possible. These include the provision of specially designed drainage systems to divert the site and road runoff away from the sensitive streams and Tai Ho Bay, re-creation of marshland and planting of 15 hectares of new woodland.

PRESENT POSITION

18. We are determined to take forward the project from the transport and traffic safety point of view. The rainstorm occurring last summer which paralysed the transport network on Lantau and the traffic accidents happened at Tung Chung Road in January and May 2000 which required the total closure of the road have clearly demonstrated the desperate need for improvement to the north-south access on Lantau. The Islands District Council and the local community have also strongly urged for the early completion of the project.

19. HyD is now liaising closely with the Environmental Protection Department on the preparation of a revised EIA report. HyD plans to resubmit the EIA report in June 2000.

20. Apart from the ACE, we shall also need to consult the CMPB as 2.2 hectares of the Country Park would be affected by the project. When we consulted the CMPB in March 1999, the Board indicated no objection to the southern connection of the alignment but had reservation on the northern section which encroaches onto the Country Park. They requested for further information on the recommended alignment as well as the tunnel option. We subsequently carried out a detailed comparison of the two alignments and provided the required information to the CMPB meeting in June 1999. We reaffirmed our previous recommendation on the alignment after taking a balanced view of all the relevant factors. The CMPB advised that we should proceed with the detailed EIA of the project and submit the detailed EIA report to them and other advisory bodies upon completion.

21. Subject to the EIA report being accepted by EPD, we plan to consult the ACE and CMPB in August/September 2000. Thereafter, we will seek the approval of the Legislative Council to fund the detailed design of the project. Our latest assessment is that construction would start in late 2002 for completion in late 2004.

ADVICE SOUGHT

22. Members are requested to note the content of the paper.

Transport Bureau
Government Secretariat
May 2000