

For Discussion  
On 25 January 2002

## **Legislative Council Panel on Transport**

### **Improvement of Tung Chung Road**

#### **PURPOSE**

This paper updates Members on the progress of the Tung Chung Road Improvement project and short-term improvement measures on Tung Chung Road, and reports on the Tung Chung Road incident of 7 December 2001.

#### **TUNG CHUNG ROAD IMPROVEMENT**

##### **Background**

2. Tung Chung Road is a substandard one-lane village road with sharp bends and steep gradients. The opening of Lantau Link and the new airport has stimulated the traffic demand between north and south Lantau and exacerbated the traffic situation on Tung Chung Road.

3. The Government has decided that the existing Tung Chung Road will be widened from a one-lane village road to a single 2-lane road, as a long-term solution to improving the north-south access of Lantau. In the interim, traffic management measures would be implemented to enhance road safety and to ensure that the traffic flow on Tung Chung Road would be maintained at an acceptable level.

##### **The Widening Works**

4. We are pushing ahead with the widening works of the existing Tung Chung Road with a target completion date of 2006. It is anticipated that the traffic throughput of the upgraded Tung Chung Road would be 770 vehicles per hour in 2006 and operating close to design capacity of 980 vehicles per hour by 2016 during morning peaks. Given the current conservatory planning policy of South Lantau, we do not expect any significant increase in traffic beyond 2016 and Tung Chung Road would be operating at a steady state.

5. The widening of Tung Chung Road is not an easy task in view of the

difficult terrain, the potential impact on the country park and other environmentally sensitive areas such as Tung Chung Stream. The recommended alignment, illustrated at **Annex A**, is the best available option taking into account all environmental constraints. It is a 7.2km long overland route with 16 bridge structures. Between Pa Mei and the Tai Tung Shan Service Reservoir, the road will be widened along the existing alignment. Between the reservoir and the crest at Pak Kung Au, the existing very steep gradient dictates that the road can only be improved off-line. Between the crest and South Lantau Road, the alignment will also need to go off-line for the same reason.

6. The proposed design compares favourably to other options (e.g. a short tunnel) in terms of the potential impact on the ecology, landscape and water quality. The alignment generally follows the natural ground profile and hence involves the least amount of earthworks and slope cutting. It minimizes the risk of polluting the Tung Chung Stream and Cheung Sha Stream, as well as the encroachment into the country park. Such a design also avoids the need for large loop bends and tall viaducts associated with other options, thus requiring a lower construction cost and shorter construction programme. We will mitigate the environmental disturbance of the recommended alignment by compensatory planting of trees and landscaping in the new slopes and other affected areas. The bridge structures and retaining walls will also be designed with sensitive architectural treatments to blend in with the environment.

7. Upon completion of the widening works, some sections of the existing Tung Chung Road (mainly in the southern section) will become obsolete. We plan to use these obsolete sections for accommodating the existing and new utility services, while serving as a walking trail and a temporary traffic diversion route in the event of temporary closure of the new road. Using the obsolete sections for one-way traffic and the new road alignment for opposite-way traffic is not recommended because of the sharp bends and steep gradients of the obsolete sections (with 2.5 km at 15-20% gradients). Even if the problem could be partly overcome by imposing a safe traffic speed, it would still be necessary to provide enough space for overtaking in case of breakdown of vehicles and maintenance of utility services.

### **Progress and Timeframe**

8. The widening works for the one-kilometer long section of Tung Chung Road between Lung Tseng Tau and Pa Mei, which will be carried out on a land reserve and hence requires no resumption of private land, will

commence in mid 2002 for completion in 2003. We will submit our funding application to the meeting of the Public Works Subcommittee on 30 January 2002. We will invite tenders for the works in February and, subject to funding approval, award the contract for commencement of construction in June 2002.

9. For the section between Lung Tseng Tau and Cheung Sha, we are carrying out the preliminary design of the improvement works to enable us to proceed with the statutory procedures under the Environmental Impact Assessment Ordinance and the Roads (Works, Use and Compensation) Ordinance, the detailed design, ground investigation and land resumption. A detailed work programme is at **Annex B**.

10. We are fully aware of the urgency of the improvement project and will take all possible steps to advance the programme of the project. We will carry out the necessary administrative and statutory procedures, detailed design and ground investigation concurrently where possible. Construction works will also be carried out at different locations concurrently. We plan to invite tenders for the works towards the end of 2003, commence construction in early 2004 and complete the works in phases from end 2005 to end 2006. Improvement works would be carried out in sections and each section would be opened to traffic as soon as it is completed to bring about local improvements.

### **IMPROVEMENT MEASURES ON TUNG CHUNG ROAD**

11. Over the past years, we have completed various improvement works to enhance traffic safety of Tung Chung Road. These include the addition of seven new passing bays, lengthening of four existing passing bays, the widening of 25 local road sections, the addition of 20 warning signs to drivers before road bends, and the installation of over 400 meters safety fences to minimise the risk of vehicles running off the road and falling down the adjacent slopes. In addition, we have improved access control at the northern entry of Tung Chung Road by providing a roundabout with prominent signs and road markings for turning away vehicles without permits, and the provision of a kiosk for inspecting permits.

12. In 2002, we will complete further 4 passing bays on Tung Chung Road together with 5 local road widening schemes. In addition, anti-skid surfacing material will be laid on 1.5km long steep road section to provide better frictional resistance for vehicles negotiating sharp bends on steep gradient. We will also construct a temporary road link connecting Tung Chung Road at Lung Tseng Tau to Chung Yat Street to reduce head-on

vehicle conflict on the existing single traffic lane on Tung Chung Road between Lung Tseng Tau and Pa Mei. All short term improvement works are expected to be completed by mid 2003. We will review the traffic situation six months after that to ascertain whether further relaxation of the prohibition hours would be appropriate.

### **TUNG CHUNG ROAD INCIDENT ON 7 DECEMBER 2001**

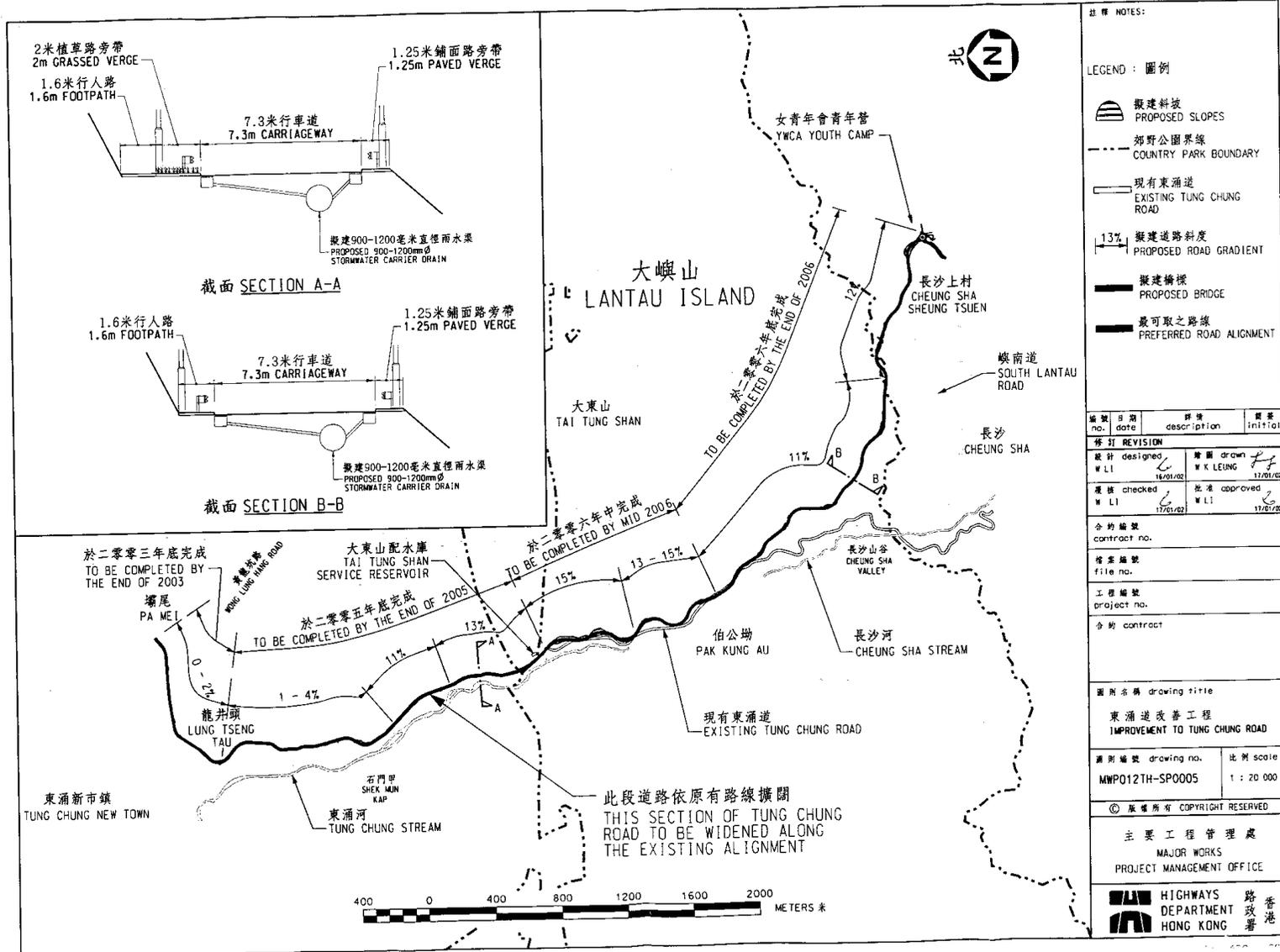
13. On 7 December 2001 an oil tanker, travelling from Tung Chung to South Lantau, overturned on the section of Tung Chung Road about one km south of Pak Kung Au at about 12.45 pm. The oil tank of the overturned tanker bursted and the oil leaked into the soil of the slope. After the accident, the entire Tung Chung Road was closed by the Police for safety reasons. The Emergency Transport Co-ordination Centre of Transport Department (TD) was immediately activated to monitor the development of the incident. The section of Tung Chung Road between Ma Wan Chung Village and Shek Mun Kap was re-opened to traffic from about 7.00 pm. Other sections of Tung Chung Road were re-opened at around 2.00 am on 8 December 2001, after the accident scene was completely cleared. During the road closure period, alternative bus and ferry services between North and South Lantau were arranged. A detailed account of the incident and remedial measures implemented is at **Annex C**.

14. In view of the complications in handling overturned tankers on Tung Chung Road as experienced in the above traffic incident, the TD has proposed to the Islands District Council Traffic and Transport Committee to ban tankers carrying dangerous goods from using Tung Chung Road. At the Island District Council Traffic and Transport Committee meeting held on 14 January 2002, members had mixed views on the proposal having regard that it might jet up the fuel price for Lantau residents. They suggested a thorough examination of the proposal and further consultation involving the Area Committees. If the proposal is accepted, dangerous goods vehicles accessing South Lantau will be required to use waterborne transport via the Mui Wo Vehicular Ferry Pier, same as the arrangement prior to the opening of Lantau Link.

### **ADVICE SOUGHT**

15. Members are invited to note the content of this paper.

Transport Bureau  
January 2002



註釋 NOTES:

- LEGEND : 圖例
- 擬建斜坡 PROPOSED SLOPES
  - 郊野公園界線 COUNTRY PARK BOUNDARY
  - 現有東涌道 EXISTING TUNG CHUNG ROAD
  - 13% 擬建道路斜度 PROPOSED ROAD GRADIENT
  - 擬建橋樑 PROPOSED BRIDGE
  - 最可取之路線 PREFERRED ROAD ALIGNMENT

編號 no.	日期 date	詳情 description	圖章 initiation
修訂 REVISION			
設計 designed	繪圖 drawn		
W.L.I	W.K.LEUNG		
16/01/02	17/01/02		
覆核 checked	批准 approved		
W.L.I	W.L.I		
17/01/02	17/01/02		

合約編號 contract no.
檔案編號 file no.
工程編號 project no.
合約 contract

圖則名稱 drawing title	東涌道改善工程 IMPROVEMENT TO TUNG CHUNG ROAD
圖則編號 drawing no.	MNP012TH-SPO005
比例 scale	1 : 20 000

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主要工程管理處  
MAJOR WORKS  
PROJECT MANAGEMENT OFFICE

HIGHWAYS DEPARTMENT 路政署  
HONG KONG 香港

此段道路依原有路線擴闊  
THIS SECTION OF TUNG CHUNG ROAD TO BE WIDENED ALONG THE EXISTING ALIGNMENT

**Annex B**

**Timetable of Tung Chung Road Improvement  
between Lung Tseng Tau and Cheung Sha**

<b>Critical Activity</b>	<b>Period Required</b>	<b>Scheduled Time</b>
1. Investigation, environmental impact assessment (EIA), and preliminary design of the project	12 months	Late April 2001 to April 2002
2. Submitting and obtaining approval of the EIA Report in accordance with the EIA Ordinance*	5 months	May 2002 to September 2002
3. Partial upgrading to Cat. A and consultants selection for detailed design*	5 months	May 2002 to September 2002
4. Detailed design*	12 months	October 2002 to September 2003
5. Tendering	4 months	October 2003 to January 2004
6. Construction	35 months	February 2004 to December 2006

**\*Note:** Activities 2 and 3 to be conducted in parallel. Gazettal under the Roads (Works, Use and Compensation) Ordinance, resolving objections under the Ordinance and land resumption will be carried out in parallel with Activities 2, 3 and 4.

## **Report on the Incident at Tung Chung Road on 7 December 2001**

### **The Incident**

On 7 December 2001 at about 12.45 pm, an oil tanker, travelling from Tung Chung to South Lantau, overturned on the section of Tung Chung Road about one km south of Pak Kung Au. The oil tank of the overturned tanker bursted and the oil leaked into the soil of the slope. Although this section of the carriageway is steep, it is about six metres wide with good visibility and can accommodate two opposite vehicles passing each other if driven carefully. Safety fences have already been erected along the edge of the carriageway next to the slope where the oil tanker plunged. After the accident, the entire Tung Chung Road was closed by the Police for safety reasons. The section of Tung Chung Road between Ma Wan Chung Village and Shek Mun Kap was re-opened at about 7.00 pm. Other sections of Tung Chung Road were re-opened at around 2.00 am on 8 December 2001, after the accident scene was completely cleared.

### **Clearance of the Scene**

2. Immediately after the occurrence of the incident, the Emergency Transport Co-ordination Centre (ETCC) of Transport Department (TD) was activated to monitor the development of the incident. Upon learning that the incident required closure of Tung Chung Road, representatives of the Police, Fire Services Department (FSD), TD, Islands District Office (Is DO), Highways Department, Water Services Department and the oil company concerned immediately arrived at the scene to handle the situation and implement remedial measures.

3. To avoid explosion during the lifting of the overturned oil tanker, FSD advised that the oil in the overturned tanker should be pumped away first. An empty oil tanker was dispatched by the oil company concerned and arrived at scene at around 2.45 pm. At around 3.30 pm, a crane was also deployed to the site getting ready to lift the overturned tanker after the oil had been emptied from the tanker. However, after careful study by the technicians of the oil company concerned, it was found not possible to pump the oil away from the tanker at its overturned position. A 200-tonne lifting crane was then called and arrived at the scene at around 7.00 pm. Subsequently, after setting up of the crane for vehicle recovery, the oil tanker was lifted back onto the road at 12:15 am the following morning. The road was then cleared and reopened to traffic at around 2.00 am after the

remaining unleaked oil was transferred onto the standby empty oil tanker.

### **Emergency Public Transport Arrangement**

4. Due to the closure of Tung Chung Road, six services of the New Lantau Bus were suspended and alternative bus and ferry services between North and South Lantau were arranged between 1.45pm on 7 December 2001 and 12.10am on 8 December 2001. The first emergency ferry between Tai O and Tung Chung was arranged within one hour after closure of Tung Chung Road and the first additional ferry trip between Discovery Bay and Mui Wo was arranged within one and a half hours. Based on feedback received by the Is DO, the residents were content with the emergency transport arrangements on that day.

### **Information to the Public**

5. Information on the road closure and emergency transport arrangements were released through the Government Information Services and electronic media. A total of six notices were issued to the media during the incident period to remind the public of the closure of Tung Chung Road and the schedules of the special ferry services. The ETCC also maintained close liaison with the Is DO. Through the Is DO, the major local organisations and District Council members involved were kept informed of the road closure situation and the emergency transport arrangements.

6. Apart from information dissemination through the media, notices were also posted at MTR Stations along the Tung Chung Line, the ferry piers at Central and Mui Wo, and major termini at Tung Chung and South Lantau to inform intending passengers of the closure of Tung Chung Road and cessation of bus services via Tung Chung Road.

7. Public views collected from the Islands District Office after the incident suggested that broadcasts should also be made inside MTR carriages and stations and that information on the emergency ferry services should also be posted at the public landing steps at Mui Wo, Tung Chung and Tai O. TD will follow up these suggestions with parties concerned.