

For information on  
23 February 2004

**Legislative Council Panel on Environmental Affairs and  
Panel on Planning, Lands and Works**

**Impact of Construction Works on Rivers in Hong Kong**

**PURPOSE**

This paper outlines the restoration plans for the damaged section of the Tung Chung Stream, Lantau, and the shotcreted stream at Sha Kok Mei, Sai Kung, and the measures to prevent recurrence of similar incidents.

**BACKGROUND**

**Tung Chung Stream**

2. Tung Chung Stream, Lantau, is about 3 kilometres long. A section of the stream of about 330 metres long between Shek Lau Po and Shek Mun Kap has been found damaged by unauthorized works. An access road of 5 to 15 metres in width has been formed alongside the damaged section of the stream, and boulders and pebbles on the streambed have been removed. The materials removed from the stream have been stockpiled alongside the stream and on vacant land near Hau Wong Temple. There are also signs of other filling activities and several temporary dams have been formed. As a result, the riparian habitats there have been disturbed.

**Stream at Sha Kok Mei**

3. The stream at Sha Kok Mei, Sai Kung, is about 1.5 kilometres long. A contractor of a village house project has laid concrete lining along section of the stream of about 160 metres in length. The concrete lining is part of the site formation work for the village houses, the plans of which were approved by the Buildings Department (BD) in 1997 and 1999 under the Buildings Ordinance (Cap 123) which deals with health and safety of buildings after consulting relevant government departments including the

Drainage Services Department (DSD) who provided comments to the Building Authority based on storm-water drainage and flood prevention considerations. At that time, concrete lining was used as it was an effective method to maintain the serviceability of the stream and was an acceptable option (The standard has since been made more environmentally friendly. Please see paragraph 9 below.)

## **RESTORATION PLANS FOR THE TWO STREAMS**

### **Tung Chung Stream**

4. The District Lands Office/Islands (DLO/Is) has demanded the Tung Chung Rural Committee (TCRC) to undertake reinstatement works to restore the damaged section of the stream to its original physical setting. An inter-departmental task force comprising members from the Environment, Transport and Works Bureau (ETWB), Agriculture, Fisheries and Conservation Department (AFCD), Environmental Protection Department (EPD), DSD, DLO/Is and Home Affairs Department has been set up to oversee the reinstatement works. A specialist group comprising members from the Advisory Council on the Environment and green/interest groups including the World Wide Fund for Nature Hong Kong, the Conservancy Association, Friends of the Earth, Green Power, Green Lantau Association and the Kadoorie Farm & Botanic Garden has also met to discuss how the reinstatement works should be carried out from the ecological angle. A list of the reinstatement requirements drawn up by the specialist group has been forwarded to the TCRC as approval conditions for the reinstatement works.

5. The reinstatement works are expected to start around mid-February for completion in April 2004 (subject to weather conditions). In carrying out the reinstatement works, reference will be made to the undisturbed sections of the Stream further up at Shek Mun Kap. The inter-departmental task force will oversee the implementation of the works. It will carry out a detailed inspection after a trial section of 10 metres has been reinstated and will allow the works to proceed only if the works at the trial section is satisfactory. The trial section, if satisfactorily reinstated, will serve as a sample for the reinstatement of the rest of the damaged section. The works thereafter will be carried out at 50-metre intervals to ensure that every stage of the works will be carried out to the satisfaction of Government. The members of the specialist group have been invited to

participate in monitoring the reinstatement works. Once the physical setting of the damaged section of the stream has been reinstated, the ecology is expected to restore gradually through the power of nature. Upon satisfactory completion of the reinstatement works, AFCD will undertake post-reinstatement monitoring of the stream for at least two years to check the progress of ecological restoration and to determine if further enhancement works are required.

### **Stream at Sha Kok Mei**

6. With the concerted efforts from the relevant departments, the Authorized Person of the village house project has agreed to submit a revised plan for the concerned section of the stream. The plan will include making potholes on the shotcreted streambed, which will be filled with pebbles, and greening measures on the stream banks in order to encourage formation of natural habitats. The Advisory Council on the Environment was briefed on 9 February of the incident. Concerned departments will ensure the stream is restored in an environmentally acceptable manner.

## **PROTECTION OF RIVERS FROM CONSTRUCTION WORKS**

### **Unauthorized Works**

7. Most of the rivers and streams in Hong Kong (including the two streams in question) are on government land and are subject to the control of the Land (Miscellaneous Provisions) Ordinance (Cap 28). Generally speaking, any person who carries out excavation works without a valid excavation permit; extracts or removes earth, turf or stone from the land without a valid removal permit; or erects any structure on the land without authorization, commits an offence under the Ordinance. In addition, some natural rivers (on both government and private land) have been designated as protected areas such as country parks, conservation areas and sites of special scientific interest, and are protected by the Country Parks Ordinance (Cap 208), the Town Planning Ordinance (Cap 131) and the Environmental Impact Assessment (EIA) Ordinance (Cap 499). The Government will step up law enforcement by taking appropriate prosecution action against acts of eco-vandalism in rivers and requiring offenders to carry out the required restoration works. AFCD will enhance inspection of ecologically

important sites. The Department is also conducting a baseline study to collect ecological data of Hong Kong and will propose designation of rivers of ecological importance that have not yet been designated as protected areas as sites of special scientific interest or conservation area as appropriate to enhance their protection.

## **Public Works**

8. The Government recognizes the importance of nature conservation as well as the development needs of Hong Kong and will continue to try to strike a balance between the two. After the EIA Ordinance was enacted in April 1998, an Environmental Impact Assessment (EIA) study, which includes ecological survey and assessment, is required during the planning stage for major projects. ETWB issued a revised Technical Circular (Works) No. 13/2003 in September 2003 to provide updated guidelines and procedures for dealing with environmental implications of government projects or proposals not covered by the EIA Ordinance. Proponent departments, including their consultants and contractors, are required to give sufficient regards to protecting the environment during design, construction and operation particularly for activities with possible impacts on sensitive areas of the environment.

9. In the implementation of flooding prevention projects in recent years, DSD has been giving more consideration to the protection of the environment and preservation of natural habitat. In general, environmentally friendly features, such as extensive vegetation and grass planting on the river embankments, will be incorporated into the projects. In environmentally sensitive areas, the bottom of a natural watercourse will be left intact where practicable, and only bank stabilization work or bank widening will be carried out. If scouring is a concern, gabions or precast grasscrete panels on the embankment and random rubble or stone on the bottom will be used instead of concrete. A document entitled "Examples of environmentally friendly drainage channels designs arising from environmental impact assessments" has been compiled to summarize such examples for reference by project proponents.

10. In September 2002, DSD issued an internal guidance circular to provide references on good practices for planning and execution of drainage maintenance works in environmentally sensitive watercourses. If the proposed works are located inside or near the environmentally sensitive

and/or ecologically important watercourses, careful consideration will be given to the proposed method of implementation so as to minimize any adverse environmental impact. Depending on the extent of the proposed works, AFCD and EPD will be notified and consulted as appropriate. The use of concrete lining or the like is to be avoided as far as possible.

### **Private Developments in the New Territories**

11. Buildings in the New Territories are governed by the Buildings Ordinance (Application to the New Territories) Ordinance (Cap 121) or by Buildings Ordinance (Cap 123) as the case may be. Applications for the construction of New Territories Exempted Houses (NTEHs) are considered by Lands Department (LandsD). In consultation with concerned departments, LandsD will decide if an NTEH should be allowed and, if so, whether a certificate of exemption in respect of site formation works and a certificate of exemption in respect of drainage works should be issued. If certificates of exemption in respect of site formation works and drainage works cannot be issued, the site formation works and drainage proposal for the NTEH will be subject to control under the Buildings Ordinance (Cap 123). The subject village house development at Sha Kok Mei is one such case.

12. Other private developments are submitted to BD who will process the submission plans in accordance with the provisions of the Buildings Ordinance (Cap 123).

13. BD operates a centralized processing system for plans submitted by private developers. The purpose of the centralized processing system is to ensure that all interested government departments are consulted and that their comments are collated by BD within the statutory time limits. For all plan submissions, BD circulates the plans to relevant departments for comment in accordance with the established arrangement. Comments falling within the purview of the Buildings Ordinance (Cap 123) will be followed up by BD within the context of the Buildings Ordinance (Cap 123).

14. To prevent recurrence of the Sha Kok Mei incident, it has been agreed that building development applications that affect natural rivers or streams will be circulated to AFCD for comments. Advice to use concrete lining would not be given in view of the greater importance to environmental protection. Advice would be given along the line set out in

DSD's internal guidance circular issued in September 2002 mentioned in paragraph 10 above. The relevant departments will review and update the relevant internal guidelines for vetting this type of applications.

## **CONCLUSION**

15. With the improvement measures mentioned above, it is expected that the rivers in Hong Kong will be better protected so as to strike a balance between our development needs and the need to protect the environment which is essential to the sustainable development of Hong Kong. We will continue to keep under review the various systems at work and make improvements where necessary.

**Environment, Transport and Works Bureau**  
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