

**For information**

**LEGISLATIVE COUNCIL  
PANEL ON PLANNING, LANDS AND WORKS  
PANEL ON ENVIRONMENTAL AFFAIRS**

**Follow-up to joint meeting on 23 March 2004**

**Introduction**

At the joint meeting of the Panel on Planning, Lands and Works and the Panel on Environmental Affairs on 23 March 2004, Members discussed the “Impact of construction works on rivers in Hong Kong” and requested the Administration to follow up the following matters –

- (a) to provide a copy of Drainage Services Department (DSD) Technical Circular No. 4/2002 and details of the 17 streams identified by the University of Hong Kong as ecologically sensitive watercourses, with updated information on the current status of the 17 streams;
- (b) to provide details of the Environmental Impact Assessment for the stream diversion relating to the Ngong Ping Cable Car Project;
- (c) to follow up Hon TAM Yiu-chung’s concern about the pollution of a river at Silver Mine Bay, Lantau Island; and
- (d) to follow up the following cases in Cheung Sha mentioned by Hon Albert Chan at the meeting –
  - (i) privately constructed water pipes straddling across rivers at Cheung Sha;
  - (ii) construction of river embankment by some shops and restaurants for commercial purposes; and
  - (iii) fixing of nails onto rocks by rock-climbers.

This information note provides the information regarding (a) and (b), and briefs Members on (c) and (d) above.

### **DSD's Technical Circular**

2. The Drainage Services Department Technical Circular NO.4/2002 was issued in September 2002 and contains information on the 17 streams identified in the report on “Conservation Recommendations for Fish Communities of Lowland Streams in Hong Kong” prepared in 2001 by the Department of the Ecology and Biodiversity, University of Hong Kong. A copy is at **Annex A**. The Technical Circular sets out good practice guides for the planning and execution of desilting and maintenance works in environmentally sensitive watercourses including the 17 streams concerned. The status of the 17 streams in terms of existing or proposed means of conservation set out in Appendix A to the Circular has been updated by the Agriculture, Fisheries and Conservation Department (AFCD) at **Annex B**.

### **The Ngong Ping Stream Diversion Project**

3. The Ngong Ping Cable Car Project, which involves construction and operation of the cable car system between Tung Chung Town Centre and Ngong Ping, development of a Theme Village in Ngong Ping and other supporting facilities, is a Designated Project under the Environmental Impact Assessment Ordinance (EIAO) (Cap.499). An EIA to assess the environmental impacts of the project was carried out by the project proponent, the MTR Corporation Limited (MTRC). The Director of Environmental Protection (DEP) approved the EIA report in June 2003.

4. The original Ngong Ping Stream passed through the centre of the proposed Cable Car Terminal and the Theme Village site. Further studies conducted by MTRC after the approval of the EIA report on the Cable Car Project has concluded that diversion of the stream is required to provide the necessary space to accommodate the architectural, planning and engineering features required for the tourist attraction. In addition, the diversion will alleviate potential flooding, water quality and

environmental hygiene problems in the area. If the stream were not diverted, in order to meet the drainage requirements to prevent flooding, the stream ranging from 2 to 5 metres in width would need to be widened to about 6 - 7 metres leaving limited spaces for the development of the Theme Village. In addition, the water quality of the stream is in general poor. MRTC has therefore proposed to divert a section of about 390m of the Ngong Ping Stream and an 80m-long ditch which was then a tributary of the stream. The diverted stream of around 305m long would be parallel to the northern boundary of the Cable Car Terminal and Theme Village site and the diverted ditch, which would be of a similar length as the existing one, would be located to the west of the site. A map showing the alignments of the existing and diverted streams is at **Annex C**.

5. Since the diverted stream will fall within the Lantau North Country Park and discharge into an area that is less than 300 m from the nearest conversation area, the proposed diversion work is a Designated Project under EIAO. As the EIA report on the Cable Car Project has already included detailed assessment of most parts of the project area, MTRC submitted a Project Profile to apply for permission to apply directly for an Environmental Permit (EP) for the stream diversion project under the EIAO in July 2003 after conducting additional field surveys. The Project Profile was exhibited for public inspection in accordance with the EIAO. DEP, with the consent of the Secretary for the Environment, Transport and Works, granted permission for MTRC to apply directly for EP in September 2003. DEP subsequently issued to MTRC the EPs for the Tung Chung Cable Car project and the stream diversion project in November 2003. The Project Profiles, EIA report and EPs concerned are available at EPD's website: [www.epd.gov.hk/eia](http://www.epd.gov.hk/eia).

6. The stream diversion project has begun since January 2004 for completion in around April 2004. The possible ecological impact is the main environmental concern. The affected section of the stream is of moderate ecological value. The habitats in the area mainly comprise plantation, shrubland and cultivation/abandoned cultivation with moderate to low ecological value. To minimize the ecological impact of the project, MRTC is required under the EP to implement a Fauna Translocation Plan. An ecologist has been engaged by MTRC to

conduct a detailed survey to ascertain the presence of any fauna species and provide recommendations to protect and translocate the fauna species which have low mobility or with their breeding sites to be affected by the project. MTRC is also required under the EP to properly implement a Compensatory Planting Plan since about 250 trees (though with no rare or protected species) will be affected by the stream diversion project. An ecologist has been engaged by them to provide recommendations and supervise the compensatory planting. The compensatory planting will, at least, include planting of 600 trees near the new stream and planting of vegetation of one hectare in area within the Lantau North Country Park. The Environmental Protection Department will continue to monitor the project to ensure that the EP conditions will be fully complied with.

### **Pollution problem at Mui Wo River**

7. The river referred to by Hon Tam Yiu-chung at the meeting is Mui Wo River that flows into the Silver Mine Bay Beach. Its catchment covers Wang Tong, Tai Tei Tong and Luk Tei Tong. According to EPD's records, the Water Quality Index of the Mui Wo River in 2003 was graded "excellent" and had very high Water Quality Objective (WQO) compliance at 99% (excluding *E.coli*). However, due to background pollution in the catchment, the mean *E.coli* level at the downstream tributaries has exceeded the targeted objective for the Mui Wo River.

8. Since the declaration of the Southern Water Control Zone, which covers the Silver Mine Bay Beach, in 1988, pollution from effluent discharges in the catchment of Mui Wo River has been progressively brought under control with a significant reduction in organic pollutants. Sullage, surface run-off and accidental overflow of septic tanks from nearby villages are now the remaining sources of pollution. EPD has been conducting regular surveillance in the river catchment area and will take appropriate enforcement actions against illegal discharge of wastewater or waste into the river under the prevailing pollution control legislation such as the Water Pollution Control Ordinance and the Waste Disposal Ordinance. Consideration will also be given to extending the sewerage infrastructure having regard to changing community needs and aspirations, and resource implications.

## **Water pipes straddling across rivers at Cheung Sha**

9. According to District Office (Islands) (DO(Is)), the water pipes concerned were installed by villagers of Cheung Sha Ha Tsuen in the 1960s with materials provided by the District Office. With the provision of water supply to the village by the Water Supplies Department since 1984, the District Office has no longer provided maintenance service for the water pipes but it is noted that some villagers are maintaining the water pipes for their own use. DO(Is) will continue to liaise with the villagers on the issue.

## **Construction of river embankment by some shops and restaurants for commercial purposes**

10. According to the Housing, Planning and Lands Bureau, some New Territories Exempted Houses near the rivers are used for commercial purposes and this does not constitute a breach of their leases. In addition, the District Lands Office/Islands (DLO(Is)) have issued short-term tenancies for garden or canopy purposes in connection with the operation of the shops and restaurants in the area, and hence there is no illegal occupation of government land by the shops and restaurants concerned. DLO(Is) would monitor the situation and take appropriate enforcement action if breaches of the lease or tenancy conditions are detected.

## **Fixing of nails onto rocks by rock-climbers**

11. According to AFCD, there are many recognized routes of different grades for rock climbing in Hong Kong. Popular sites for rock climbing within Country Parks include Tai Lam, Lion Rock, Ma On Shan and South Lantau. The activity is not prohibited nor controlled under the Country Parks Ordinance (Cap.208). As rock climbing is conducted on crags, cliffs and headlands which are usually situated away from popular hiking routes, the disturbance to other country park users including the potential risk caused by the nails left on the rocks should not be significant. AFCD has so far not received any complaints from the public or park visitors against the activity. Despite that, Park Wardens of AFCD will continue to make periodic patrols to the popular

sites for rock climbing and take appropriate action to ensure safety of visitors.

12. Since fixing nails is an essential part of rock climbing, it is not possible to stop this act unless the activity is totally prohibited in country parks. As a general practice, rock-climbers will stick to the established lines. Retro-bolting may have greater impact on the environment and is not recommended.

Environment, Transport and Works Bureau  
April 2004

Ref: DSD T 1/50/32

9 September 2002

**Drainage Services Department**  
**Technical Circular No. 4/2002**

**Drainage Maintenance Works on**  
**Environmentally Sensitive Watercourses**

**Scope**

This Circular is to disseminate good practice guides for the planning and execution of desilting and maintenance works on environmentally sensitive watercourses.

**Background**

2. The Environmental Impact Assessment Ordinance (Chapter 499) (EIAO) binds the Government. Projects listed in Schedules 2 and 3 of the EIAO are designated projects for which EIAO procedures have to be followed, such as applying for environmental permits and submitting environmental impact assessment reports. Designated projects include dredging operation exceeding 500,000 m<sup>3</sup> or a dredging operation which is less than 500 m from the nearest boundary of an existing or planned:

- (i) site of special scientific interest (SSSI)
- (ii) site of cultural heritage
- (iii) bathing beach
- (iv) marine park or marine reserve

- (v) fish culture zone
- (vi) wild animal protection area
- (vii) coastal protection area
- (viii) conservation area

or a dredging operation which is less than 100 m from a seawater intake point. Designated projects also include dredging works partly or wholly in an existing or gazetted proposed country park or special area, a conservation area, an existing or gazetted proposed marine park or marine reserve, a site of cultural heritage, and a site of special scientific interest. However, minor maintenance works to drainage systems are not classified as designated projects and EIAO procedures are not applicable.

3. In March 2001, a report entitled “Conservation Recommendations for Fish Communities of Lowland Streams in Hong Kong” (hereafter cited as “the HKU Report”) was released by the Department of Ecology and Biodiversity of the University of Hong Kong. The HKU Report recommended, among other things, better protection either through SSSI listing or designation as country park, to a list of 17 lowland streams identified to have high ecological value. It was distributed to various Government departments/bureaux, calling for conservation efforts to be made to the listed streams.

4. It is the department’s mission to carry out its work in an environmentally responsible manner. Therefore, the department must take appropriate precautionary measures in the execution of maintenance works to minimize any impact caused to streams of high ecological value, while at the



same time ensuring that the community is provided with a good level of flood protection. In line with this principle and to promote awareness among the department's staff of the need to take care of environmentally sensitive and/or ecologically important watercourse, guidance notes for executing maintenance works to such watercourses are set out in the following paragraphs. These will be reviewed in due course after experience are gained in such work.

### **List of Ecologically Important Watercourses**

5. Environmentally sensitive and/or ecologically important watercourses include the 17 watercourses identified in the HKU Report given at Appendix A. The current status of these watercourses in terms of designated or proposed means of conservation as advised by Agriculture, Fisheries and Conservation Department (AFCD) are also indicated at Appendix A. In addition to these 17 watercourses, attention should also be paid to other environmentally sensitive watercourses, including:

- a) watercourses with good landscape value and visual appeal;
- b) watercourses with environmental value which includes plant and animal life.

### **Planning of Desilting and Maintenance Works**

6. Before proceeding with any desilting or maintenance works, except for emergency works, the maintenance engineer should check to ascertain if any of

the proposed works will be located in or near any of the environmentally sensitive and/or ecologically important watercourses and, in particular, those shown at Appendix A. In case of doubt on the extent of the watercourses in the list at Appendix A, advice from AFCD should be sought.

7. If the proposed works will be located inside or near one of the environmentally sensitive and/or ecologically important watercourses, careful consideration should 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 should be notified and/or consulted as appropriate on the proposed method and mitigation measures for executing the works. Their comments on necessary mitigation measures should be seriously considered and incorporated as far as practicable. Any difference in opinion on the right balance between flood protection and ecological conservation should be brought to the attention of the relevant Chief Engineer.

8. In planning for the works, the following considerations are relevant:
- (a) Desilting or maintenance works should preferably be carried out within the dry season where flow in the watercourse is low. Rapid flow in a watercourse during the wet season together with the on-going maintenance works will have a higher potential of inducing collapse of the riverbanks and resulting in highly turbid water.
  - (b) Phasing of the works should be considered to better control and minimize any impact caused, and to provide refuges for aquatic

animals. Where possible, works should be carried out along half width of the watercourse section by section. A free passage along the watercourse is necessary to avoid forming stagnant water in any phase of the works and to maintain the integrity of aquatic communities.

- (c) Temporary access to the works site should be carefully planned and located to minimize disturbance caused to the watercourse and adjacent vegetation by construction plants.
- (d) The use of lesser or smaller construction plants may be specified to reduce disturbance to the riverbed where fish habitats are located.
- (e) The use of concrete or the like should be avoided or minimized. More environmental friendly measures for riverbank stabilization such as using gabions with planting surface, turfing on riverbanks and crib-walling units with parasitic planting should be considered.
- (f) Proper location for the disposal of construction debris and spoil should be identified before commencement of the works.

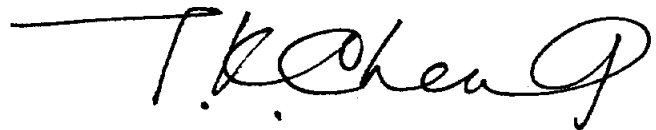
### **Precautionary Measures During The Construction Stage**

9. Depending on the extent of the proposed maintenance works and particulars of relevant watercourses, different precautionary measures may have to be devised and implemented. Based on past discussions with AFCD,

EPD and local ecologists, some of the measures generally recommended for adoption are listed below:

- (a) Before commencement of works, AFCD can be consulted for the presence of rare species within the work site. Precautionary measures such as relocation of the rare species outside the site should be discussed with AFCD.
- (b) Before commencement of works, an inspection of works site should be made to check if there exist any ponds of considerable size which should be preserved with care as far as possible. Stream ponds of considerable sizes are usually favourite habitats of fish communities and removal of them can be detrimental to fish communities.
- (c) The proposed works site should be enclosed to prevent impacts on the water qualities outside the works site, such as by placing of sandbags or silt curtains with lead edge at bottom with properly supported props.
- (d) The natural bottom of the river should be preserved as much as possible to avoid damage to the river habitats. If temporary access tracks on riverbed is unavoidable, they should be kept to the minimum width.
- (e) Construction debris and spoil should be properly disposed of.

- (f) Removal of vegetation alongside the riverbanks should be minimized. When disturbance to vegetation is unavoidable, all disturbed areas should be hydroseeded or planted with suitable vegetation to blend in with the natural environment after completion of works.
- (g) Proper shoring may need to be erected in order to prevent soil / mud from slipping into the watercourse.
- (h) Supervisory staff should be assigned to station on site to closely supervise and monitor the works.



(R T K CHEUNG)

Director of Drainage Services

List of Ecologically Important Watercourses

Location of Watercourses *		Current Status <sup>+</sup> (Means of Conservation as advised by AFCD)
1.	Deep Water Bay, Hong Kong Island	Better protection under zoning plan to be considered
2.	Ham Tin, Sai Kung	Designated CA
3.	Hoi Ha, Sai Kung	Better protection under zoning plan to be considered
4.	Upper Lam Tsuen River, Tai Po	Ecological conditions under monitoring by AFCD
5.	Kau Lung Hang Tai Wo, Tai Po	Ecological conditions under monitoring by AFCD
6.	So Lo Pun, Plover Cove	Remote site not subject to development threat
7.	Lin Ma Hang, North	Proposed as SSSI
8.	Sandy Ridge Cemetery, Man Kam To	Located within FCA unlikely to be subject to development threat
9.	Tan Shan River, North	Ecological conditions under monitoring by AFCD
10.	Loi Tung, Sha Tau Kok	Existing land use zoning (AGR, V) is considered appropriate
11.	Sheung Wo Hang, Sha Tau Kok	Designated CA
12.	Cheung Po, Kam Tin	Better protection under zoning plan to be considered
13.	Tong Fuk, Lantau	Designated CPA
14.	Sham Wat, Lantau	Ecological conditions under monitoring by AFCD
15.	Mok Ka Tsuen, Tung Chung	Proposed CA in draft OZP
16.	Tai Ho, Lantau	Designated SSSI
17.	Sha Lo Tung Lei Uk, Tai Po	Designated SSSI

Remarks : <sup>+</sup> AGR – agriculture; CA - Conservation Area; CPA - Coastal Protection Area; OZP – Outline Zoning Plan  
SSSI - Site of Specific Scientific Interest; V – Village Type Development; FCA – Frontier Closed Area

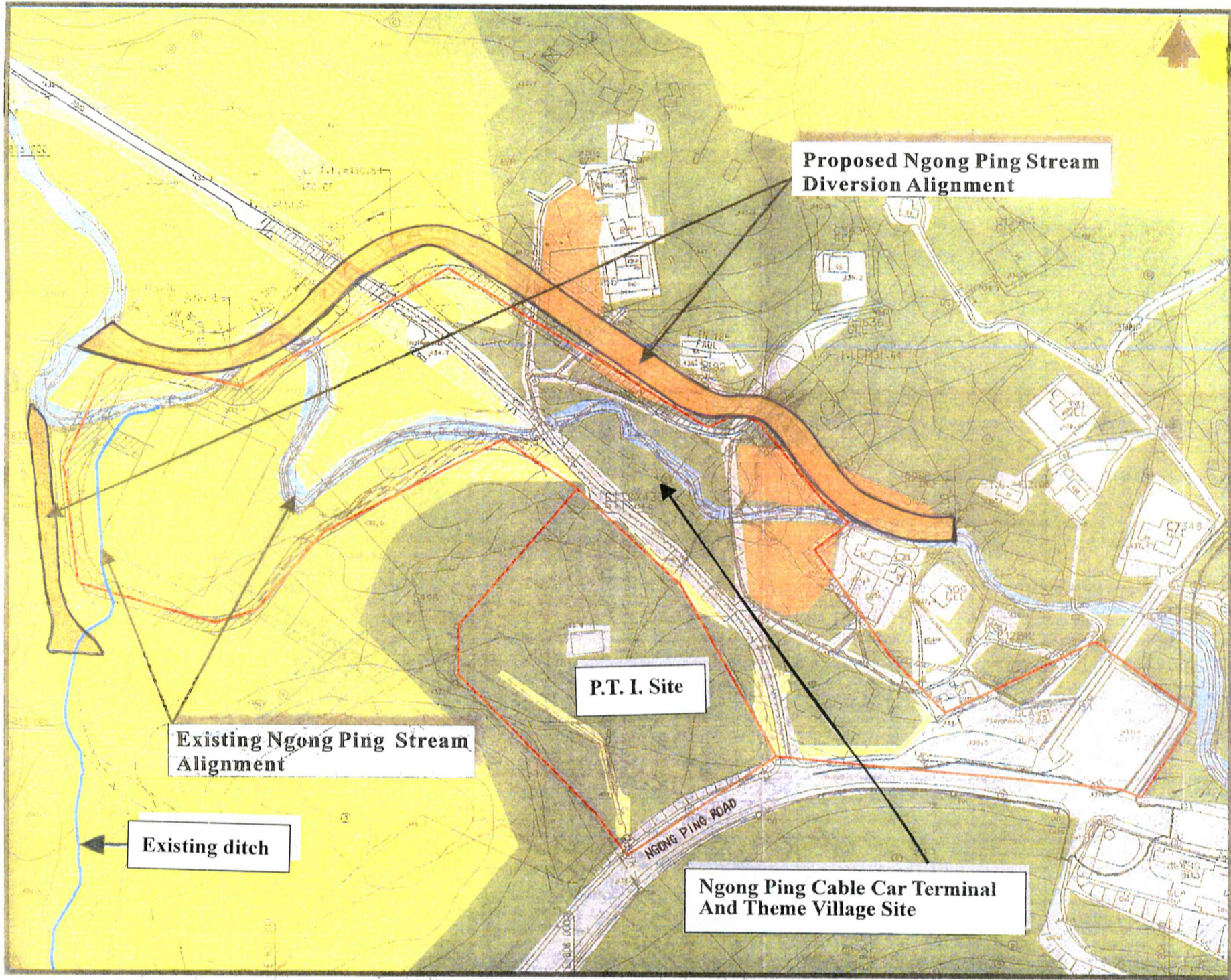
\* Reference: “Conservation Recommendations for Fish Communities of Lowland Streams in Hong Kong” prepared by Department of the Ecology & Biodiversity, the University of Hong Kong, 19 March 2001.

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11.	Sheung Wo Hang, Sha Tau Kok	Designated CA
12.	Cheung Po, Kam Tin	Better protection under zoning plan to be considered
13.	Tong Fuk, Lantau	Designated CPA
14.	Sham Wat, Lantau	<b>Better protection under zoning plan to be considered</b>
15.	Mok Ka Tsuen, Tung Chung	Proposed CA in draft OZP
16.	Tai Ho, Lantau	Designated SSSI
17.	Sha Lo Tung Lei Uk, Tai Po	Designated SSSI

Remarks: <sup>+</sup> AGR – agriculture; CA – Conservation Area; CPA – Coastal Protection Area; OZP – Outline Zoning Plan  
SSSI – Site of Specific Scientific Interest; V – Village Type Development; FCA – Frontier Closed Area

\* Reference: “Conservation Recommendations for Fish Communities of Lowland Streams in Hong Kong” prepared by Department of the Ecology & Biodiversity, the University of Hong Kong, 19 March 2001.



**Proposed Ngong Ping Stream  
Diversion Alignment**

**P.T. I. Site**

**Existing Ngong Ping Stream  
Alignment**

**Existing ditch**

**Ngong Ping Cable Car Terminal  
And Theme Village Site**

**Alignments of Existing & Diverted Ngong Ping Stream**