



**綠色力量**  
GREEN POWER



**生態教育及資源中心**  
Eco-Education & Resources Centre

**BY EMAIL ONLY**

The Secretary,  
Town Planning Board,  
15th Floor, North Point Government Offices,  
333 Java Road,  
North Point, Hong Kong  
(Email: [tpbpd@pland.gov.hk](mailto:tpbpd@pland.gov.hk))

8 March, 2016

Dear Sir/Madams,

**Green Power and Eco-Education & Resources Centre's Joint Comments on  
Draft Tung Chung Valley Outline Zoning Plan No. S/I-TCV/1, and  
Draft Tung Chung Town Centre Area Outline Zoning Plan No. S/I-TCTC/21**

***Long-term Preservation of Tung Chung River-cum-Bay***

1. Green Power and Eco-Education & Resources Centre jointly welcome the draft Tung Chung Valley Outline Zoning Plan (TCVOZP) gazetted on 8 January 2016. However, we consider that the present draft TCVOZP is deficient for the long-term conservation of Tung Chung River-cum-Bay system which is one of few natural rivers remaining in the territory, particularly with undisturbed estuaries (Appendix A).
2. We, as co-signed groups, concur to the joint letter date 8 March 2016 submitted to Town Planning Board regarding the above-captioned draft TCVOZP.
3. In order to effectively preserve and manage the biodiversity, natural landscape and hydrology of Tung Chung River, Valley and Coast, we call for
  - (a) Cover Tin Sam and Wong Lung Hang areas with a new Development Permission Area (DPA) plan or Country Park extensions.
  - (b) Establishing a River Nature Park for proactive management of natural riverine and estuarine ecology and landscape, and for flood regulation.
  - (c) Zoning Tung Chung Bay as SSSI, as recommended by Green Groups' recommended DPA.
  - (d) Early implementation of environmental protection and conservation landuses proposed in the TCVOZP in prior to other project works in Tung Chung area covered by OZP No. S/I-TCV/1, S/I-TCTC/21 and S/I-TCE/1.
  - (e) Traffic restriction in Tung Chung Valley and Bay, especially for construction trucks and machinery, immediately.

***Fishery and Ecological Value of Tung Chung Bay***

4. Green Power and the Eco-Education & Resources Centre conducted survey in Tung Chung Bay in 2012 and found that Tung Chung Bay is of high ecological importance for pipefish. Also, larvae of economic species were found including family Callionymidae, Clupeidae, Engraulidae, Gobiidae, Sciaenidae, Sillaginidae, Lutjanidae.

5. The Administration's ecological and fisheries survey findings also confirm that Tung Chung Bay is an important spawning and nursery ground for sea horses and other marine life, and a rich fisheries resources site.
6. Thus, the entire Tung Chung Bay is a significant spawning and nursery ground for economically valuable fishes and crustaceans, and diverse marine life that are supported by the intact Tung Chung River and undisturbed Tung Chung River estuary, Tung Chung Bay, mangroves and intertidal mudflat.
7. We are highly concerned about the impacts of any proposed Residential and Village Type Development zones in TCVOZP on the water quality and ecology of Tung Chung Bay.



Pipefish 海龍

### ***Preservation of Wong Lung Hang Mangroves***

8. The "Commercial" ("C") zones in TCVOZP, especially Area 38A, in which a public transport terminus is planned, encroaches the mangroves on the western bank of Wong Lung Hang estuary where a breeding population of dragonfly Mangrove Skimmer (*Orthetrum poecilops*) 斑灰蜻 was discovered in 2015 by Green Power. Mangrove Skimmer is listed as "Vulnerable" by IUCN and locally rare.
9. We urge that these "C" zones in TCVOZP will threaten Mangrove Skimmer population and we recommend include its habitat in River Park or other proper conservation zoning are needed.
10. The public transport terminus should be relocated in Area 107("GI/C") or Area 39 ("R(A)1") in S/I-TCTC/21 to link more efficiently with the planned underground railway station to the west of Yat Tung Estate.



Mangrove Skimmer 斑灰蜻

### **Ecological Value of Tin Sam and Wong Lung Hang**

11. Seventy butterfly species are recorded in the Tung Chung Valley and San Tau (nearby Tin Sam), four of them are of conservation importance including Oriental Striped Blue (*Leptotes plinius*) 細灰蝶, Peacock Royal (*Tajuria cippus*) 雙尾灰蝶, Golden Birdwing (*Troides aeacus*) 金裳鳳蝶 and Common Birdwing (*Troides helena*) 裳鳳蝶.
12. Thirty-four species of dragonflies and damselflies, which comprise 27% of total species number of Hong Kong, were recorded in Wong Lung Hang by Green Power in 2015.



Common Birdwing 裳鳳蝶



Chinese Greenwing 華豔色蟳

13. According to HKPSG, the principle of “retain significant landscapes, ecological and geological attributes and heritage features as conservation zones” (Sec. 2.2, Ch. 10) should be adopted to preserve the ecologically important and biologically diverse San Tau, Tung Chung Bay and Wong Lung Hang, which should be implemented through coverage of these areas with a statutory DPA Plan.

### **The Basic Principles to Preserve Tung Chung River-cum-Bay System**

14. Regarding the preservation of Tung Chung River and Tung Chung Bay, Green Power submitted a letter to the former Chief Executive of HKSAR, Mr. Donald Tsang Yam Kuen, on 21 September 2010 and the current Chief Executive, Mr. C. Y. Leung, on 8 January 2013, and Green Power and Eco-education & Resources Centre would like to reiterate that:
  - (a) river works should be avoided as far as possible, the natural river courses and estuary should not be altered in any scale;
  - (b) land-use planning for Tung Chung River basin and estuary should take into account of its permeability, natural landscape and ecology;
  - (c) sufficient vegetation cover should be maintained in the basin; and
  - (d) no sewage or stormwater of developed areas should be drained into Tung Chung River channel and Tung Chung Bay.

### ***Wise and Sustainable Landuse for Tung Chung River Valley and Tung Chung Bay***

15. The government should protect and conserve the natural resources in Tung Chung River Valley for compatible community use and enjoyment. Compatible landuse should also be recommended in TCVOZP and Tung Chung New Town Extension (TCNTE) Study for further enhancement of the ecological and cultural value of Tung Chung Valley and Tung Chung Bay such as:
- (a) an eco-tourist hub acting as an interchange and interconnection to connect different hiking and ancient trails in the area
  - (b) an stream trekking base for stream trekkers to explore the scenic spots along Tung Chung River
  - (c) open space and greening areas integrating original natural features such as river courses, estuary, mangrove and *fung shui woods*
  - (d) provision of educational facilities such as museums with the theme of fishery, river, aquatic life and fish, natural history of Lantau, incense industry at Sha Lo Wan, Tung Chung's history, etc
  - (e) a visitor centre can be provided in the non-sensitive part of Tung Chung Valley to help the public to admire the ecological importance of Tung Chung River-cum-Bay system, and facilitate hikers and stream trekkers
  - (f) facilitating visitors to visit various tourist spots in the area, including: Ngong Ping Cable Car, Tian Tan Buddha Statue, Chek Lap Kok International Airport, Tung Chung Fort and etc, in an environmental-friendly way
  - (g) making use of the existing Tung Chung River landscape and cultural heritage to enhance the tourist appeals of Tung Chung River Valley and promote passive recreational activities (e.g., eco-trails linking to the surrounding country parks, biking, leisure fishing, etc.)
  - (h) Scientific research and education
16. However, such land uses have not proactively incorporated in the proposed River Park and other zonings in TCVOZP.

### ***Foreseeable non-enforceable vandalism***

17. Tung Chung West will be highly vulnerable to dumping of construction and demolition (C&D) waste generated in future development in Tung Chung because of the long transport distance to waste facilities such as landfills, and the charging for vehicles travelling through North Lantau Highway.
18. Filling of the river banks and wetlands with wastes and/or soil debris are continually reported in Tung Chung West, particularly Shek Lau Po and Shek Mun Kap. Such activities would destroy the natural habitats in Tung Chung River Valley and threaten the ecology and water quality of Tung Chung River.
19. We are particularly concerned about the following foreseeable environmental vandalism which, according to current judicial and enforcement framework, are extremely difficult to prevent, enforce and reinstate:
- (a) Discharge of domestic wastewater through stormwater drainage system to Tung Chung River-cum-Bay,
  - (b) Connection of outfall of stormwater drainage system to Tung Chung River-cum-Bay,
  - (c) Dumping, reclamation, eradication of vegetation in Tung Chung River-cum-Bay,
  - (d) Incompatible developments in Tung Chung West

20. In addition to the draft TCVOZP which is preceded by the draft TCVDPA, feasible measures to prevent uncontrollable vandalism and incompatible land use activities from encroaching Tung Chung West and damaging Tung Chung-cum-Bay include
- (a) restriction of construction trucks and similar machineries access to sections of Tung Chung Road and Yu Tung Road to the west of Chung Yan Road,
  - (b) mandatory collection of C&D wastes and provision of transportation of C&D wastes to other proper locations & facilities,



Tranquil Tung Chung River Valley



Illegal dumping near Wetland Park, Tin Shui Wai (Newspaper clipping)

### **Preservation of Hydrology**

21. In order to preserve the water quality of Tung Chung River and Bay, land uses leading to direct discharge of stormwater drainage, treated or untreated sewage should not be allowed upstream or within the courses of “Ecologically Important Streams” in Tung Chung designated by AFCD<sup>1</sup>.

22. A long-term, innovative and comprehensive drainage strategy and system should be formulated for Tung Chung West which must preserve the Tung Chung River intact. Completion of the construction of the “Sustainable Urban Drainage System” should be in prior to commencement of any other works.

### **Air Pollution**

23. Ozone is the major air pollutant affecting Tung Chung’s air quality which had the longest hours of Air Pollution Index reaching of exceeding 101 during 1999 to 2013, and Air Quality and Health Index reaching 10 or 10+ in 2014 and 2015 (Table 1 below). EPD also admitted in the media in February 2015 that Tung Chung is one of districts with highest health risk in terms of air quality<sup>2</sup>.

24. We opine that land use zoning should not lead to deterioration of air quality of Tung Chung or expose the residents under air quality of high health risk.

<sup>1</sup> Ecologically Important Streams, AFCD, HKSAR:

[https://www.afcd.gov.hk/english/conservation/con\\_wet/streams\\_rivers\\_hk/Con\\_NSR/Tung%20Chung%20Stream.pdf](https://www.afcd.gov.hk/english/conservation/con_wet/streams_rivers_hk/Con_NSR/Tung%20Chung%20Stream.pdf)

<sup>2</sup> 「臭氣濃度新高 屯門元朗東涌重災」:明報 A14 , 2015 年 2 月 25 日

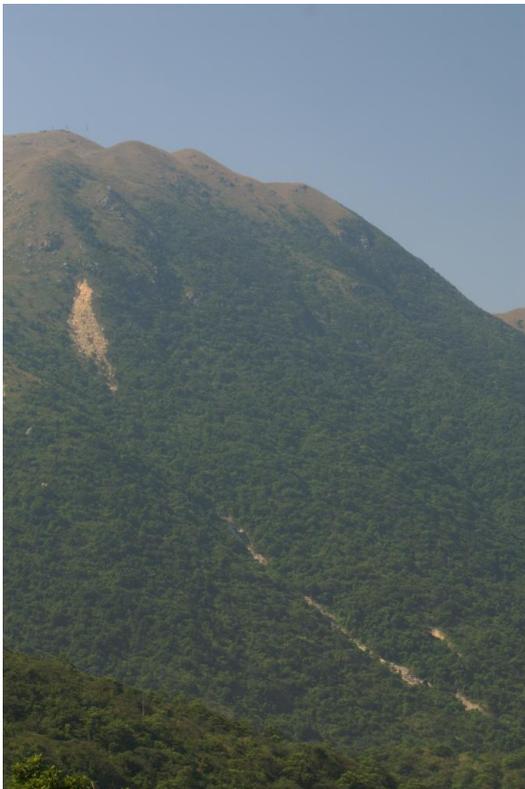
Table 1: The number of days with Air Quality & Health Index = 10 or 10+ for General Air Monitoring Stations.

| Year | Central/<br>Western | Eastern<br>District | Kwun<br>Tong | Sham<br>Shui Po | Kwai<br>Chung | Tsuen<br>Wan | Yuen<br>Long | Tuen<br>Mun | Tung<br>Chung | Tai Po | Sha<br>Tin | Tap<br>Mun |
|------|---------------------|---------------------|--------------|-----------------|---------------|--------------|--------------|-------------|---------------|--------|------------|------------|
| 2014 | 5                   | 2                   | 5            | 7               | 8             | 7            | 13           | 16          | 18            | 3      | 5          | 3          |
| 2015 | 9                   | 6                   | 10           | 6               | 5             | 6            | 8            | 9           | 16            | 5      | 4          | 3          |

Figures in red, orange and yellow box are the first, second and third highest across the row.

### Geotechnical Risks

25. We have grave concerns about the geotechnical aspects of the proposed high-rise residential development in Area 42 and 46 in Draft Tung Chung Town Centre Area Outline Zoning Plan No. S/I-TCTC/21. In particular, the eastern slope of Nei Lak Shan to the west of Tung Chung River Valley is composed of the extensive mantle of colluviums. Major destructive landslide incidents occurred in Tung Chung area on 17 July 1992, 5 November 1993 and 7 June 2008. Therefore, land use planning in Tung Chung West must take into account of the geotechnical stability.

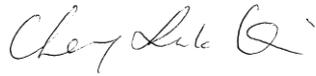


A Large-scale debris flow occurred in Tung Chung Valley in 2008

26. Green Power and Eco-Education & Resource Centre hope that Town Planning Board could address our environmental concerns stated above and should not compromise the remaining valuable natural Tung Chung River and Bay recklessly to ill-planned new town development. We recommends that the government should take a novel and environmental-friendly approach for TCVOZP and Outline Zoning Plan No. S/I-TCTC/21 to demonstrate how natural heritage and development can coexist in Hong Kong, as an advanced and green city.

For any enquiries and questions, please do not hesitate to contact me at Green Power (T: 3961 0223; F: 2314 2661; E-mail: [lkcheng@greenpower.org.hk](mailto:lkcheng@greenpower.org.hk)).

For and on behalf of  
**Green Power and  
Eco-Education & Resources Centre,**



Dr. Cheng Luk-ki  
Division Head,  
Scientific Research and Conservation  
Green Power

Attachment:  
Appendix A - Evaluation of Tung Chung River-*cum*-Bay ecosystem

**Appendix A - Evaluation of Tung Chung River-cum-Bay ecosystem**

Tung Chung River-cum-Bay is important habitat in the territory because it contains

1. mature native woodland larger than one hectare
2. undisturbed natural coastal area larger than one hectare or longer than 500 metres in linear measurement
3. intertidal mudflats larger than one hectare
4. established mangrove stands of any size
5. brackish or freshwater marshes larger than one hectare
6. established seagrass bed of any size
7. natural stream courses and rivers longer than 500 metres

Table A.1 Evaluating Tung Chung River-cum-Bay

| Criteria           | Remarks  |
|--------------------|--|
| Naturalness        | Tung Chung River and Bay are highly valued because they are either truly natural habitats (e.g. Most segments of Tung Chung River courses and the entire intertidal mudflat and mangroves in Tung Chung Bay) |
| Size               | The area of Tung Chung River Basin and Bay are significantly large which are 11.0 and 1.2 square kilometre respectively.   |
| Diversity          | The species assemblages and communities are diverse and of high conservation value.  |
| Rarity             | Natural undisturbed estuary of Tung Chung River is rare. (Refer to Table A2 below)<br>Rare species are also present.   |
| Re-creatability    | Natural river courses, estuaries and intertidal mudflat are extremely difficult to be re-created artificially.   |
| Fragmentation      | High connectivity and continuity along Tung Chung River's whole length from the montane area to estuary and Tung Chung Bay.  |
| Ecological linkage | Tung Chung River-cum-Bay ecosystem includes physically and functionally interrelated and interconnected habitats: River courses, estuary, intertidal mudflat, seagrass bed, woodlands and etc.               |

|                                |   |
|--------------------------------|---|
| Potential value                | With proper landuse planning and effective preservation measures, the ecological values of Tung Chung River-cum-Bay ecosystem will be further enhanced and so is its fishery resources. |
| Nursery/breeding ground        | Tung Chung River-cum-Bay ecosystem is very important for the regeneration and long term survival of many organisms and their populations.   |
| Age                            | Tung Chung River-cum-Bay ecosystem comprises ancient natural habitats.  |
| Abundance/Richness of wildlife | Tung Chung River-cum-Bay ecosystem is rated high as it is supporting large variety and population of wildlife.  |

Therefore, Tung Chung River-cum-Bay ecosystem is of rare, unique and very high in ecological value.

Table A2

| Stream Course           | Natural Section in Lower Course   | Naturalness of Estuary     | Water Quality at Lower Course in 2014 - E. Coli (cfu/100ml) (River Quality Monitoring Station) | Accessibility |
|-------------------------|---|----------------------------|--|---------------|
| <b>Tung Chung River</b> | Small section - about 650m was channelised  | Preserved (Tung Chung Bay) | 48(TC1)<br>79(TC2)   | Easy          |
| <b>Tuen Mun River</b>   | Completely channelised  | Destroyed                  | 2,400 (TN6)  | N/A           |
| <b>Shan Pui River</b>   | Completely channelised; the estuary close to Ramsar Site still retain natural river bed | Preserved (Ramsar Site)    | 490,000(YL3)   | Difficult     |
| <b>Kam Tin River</b>    |   |                            | 46,000(KT1)<br>200,000(KT2)  | N/A           |
| <b>Lam Tsuen River</b>  | Completely channelised  | Destroyed                  | 33,000(TR12I)  | N/A           |
| <b>Tai Po River</b>     | Completely channelised  | Destroyed                  | 12,000(TR13)   | N/A           |
| <b>Shing Mun River</b>  | Completely channelised  | Destroyed                  | 1,300(TR19I)   | N/A           |