



BY EMAIL AND FAX

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Dear Ms. Wong,

Tung Chung New Town Extension Study – Environmental Impact Assessment Report

Green Power would like to draw your kind attention to the above-captioned (EIA) Report (the Report).

Long-term preservation of Tung Chung River-cum-Bay

1. At present, the proponent (i.e. Civil Engineering and Development Department) is only responsible for the study, design and construction of the “Designated Projects” covered by the Report, who is not the legal management or enforcement authority for preservation of Tung Chung River-cum-Bay system after completion of project.
2. The present proponent will not be liable for the environmental vandalism under EIAO which is
 - (a) after completion of “Designated Projects” covered by PP,
 - (b) outside the work areas or construction sites of the “Designated Projects” covered by PP, EIA reports or Environmental Permit,
 - (c) not able to be proven by any admissible evidences to courts.
3. Also, preservation of Tung Chung River-cum-Bay system, in the context of the above-captioned proposed project under EIAO, is processed as a mitigation measure rather than a “conservation-orientated project” which only aims to gain granting of Environmental Permit under EIAO. Comprehensive and proactive conservation plan is not proponent’s priority.
4. Therefore, under such institutional and statutory arrangement, long-term conservation for Tung Chung River-cum-Bay system can only be guaranteed with stringent clauses in Environmental Permit.

Foreseeable non-enforceable vandalism

5. With these constraints, 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 (TCW).

Waste

5. Although the Construction & Demolition (C&D) materials generated during the site-clearance and site formation are proposed to be reused as backfill materials, it is still possible that such materials are dumped or stored at ecologically important areas. Therefore, the relevant authorities must confirm the Construction & Demolition Material Management Plan (C&DMMP) constitutes workable measures to ensure no C&D materials are dumped or stored in ecologically-sensitive areas identified by the Reports, i.e. SSSI, CPA, CA, GB, the proposed River Park, SUDS and Country Parks, and transferred to WENT and Tuen Mun Area 38 Fill Bank as mentioned in Section 7.3.2.19.

6. Regarding Section 7.4.1.8, proper implementation of trip-ticket system should effectively avoid the illegal dumping and landfilling of C&D materials on farmlands/riverbanks at TCW. However, there have been many cases of cheating of the system. Stringent documentation, verification and monitoring for the system must be implemented to avoid landfilling of ecologically sensitive areas and flooding.

7. Regarding 7.4.2.2, Development Permission Plan (DPA) plan is not effective for banning illegal dumping and landfilling because

- (a) the scale of dumping or landfilling may not be considered as a development in view of the interpretation of Town Planning Ordinance, for example, piling of soil on the river banks.
- (b) the nature of dumped or landfilled materials may not be considered as breach of land use of zoning in DPA plan, for example, filling of topsoil in a wetland which is formerly a wet agricultural land.
- (c) even remediation is implemented after vandalism, the offender may not need to reinstate the site back to the original physical setting. For example, the offender may only be required to grow trees or turf on a reclaimed wetland because of its "Agriculture(AGR)" zoning of the wetland. Growing trees and turf can fulfill the land use under "AGR" zone.
- (d) remediation of damaged habitats cannot guarantee the reinstatement of substratum, vegetation, hydrology, water quality, flora and fauna, etc.

Water

8. Regarding Section 5.6.11.13, the water quality objectives (WQO) have not proven to be suitable for the survival and reproduction of aquatic life in Tung Chung River such as Beijiang Thick-lipped Barb (*Acrossocheilus beijiangensis*), and in estuary such as Tri-spine Horseshoe Crab (*Tachypleus tridentatus*).
9. Some overseas researches have demonstrated that the eco-toxicity of treated effluent remains high for aquatic fauna¹. Therefore, discharge of treated sewage and surface runoff should not be rationalized by compliance with WQO. Ecological-based standards of water quality should be derived for the preservation of aquatic ecosystem of Tung Chung River, Estuary and Bay.
10. Moreover, Table 5.38 only shows the estimated proportion of removal of water pollutants after treatment by SUDS and Treatment Ponds. No exact concentrations of water pollutants are given. Such information is useful for the assessment of water quality but not survival of aquatic life because they respond to the nature of pollutants and pollutant concentration present in water, rather than how much pollutants are removed. 99.9% removal of cyanide in treated sewage is still catastrophic to aquatic ecosystem.
11. The function of sedimentation tanks and silt/sediment trap is to reduce the level of suspended solid and grit in the collected runoff. Any pollutants in solution, colloid and floating forms will still be remained in the runoff. Thus, the effluents of sedimentation tanks and silt/sediment trap must not be discharged to Tung Chung River, Estuary and Bay.
12. In order to avoid environmental vandalism, incompatible developments and pollution of Tung Chung River and Estuary, River Park, SUDS and Polder Scheme have to be implemented promptly and in prior to other developments in TCW.
13. The septic tanks of rebuilt and newly built New Territories Exemption Houses in Tung Chung should not be constructed within 30 metre of either side of watercourse to avoid pollution of river water by the sewage.
14. We support the proposed mitigation measures (Section 9.8.3.13 to 9.8.3.19) to avoid impacts to ecologically important sites by defining and maintaining construction site boundaries.

¹ Chan, J.P., et al., Developmental toxicity of treated municipal wastewater effluent on *Bombina Orientalis* embryos, *Environmental Toxicity and Chemistry*, Vol. 33, No. 4. pp. 954-961, 2014.

Vasquez, M.I., Fatta-Kassinos, D., Is the evaluation of "traditional" physiochemical parameters sufficient to explain the potential toxicity of the treated wastewater at sewage treatment plant?, *Environ Sci Pollut Res* (2013) 20:3516-3528

Petala, M., et al, Toxicology and ecotoxic impact of secondary and tertiary treated sewage effluents, *Water Research* 43 (2009) 5063-5074.

Air

15. “No adverse residual air quality impact during the operational phase of the Project’ (Section 3.5.8.1) was concluded in the Report which is the consequence of biased and over-optimistic presumption.
16. As shown in Diagram 3.4, the predicted air quality of the Project mainly attributable to presumed significant reduction of the annual emission of NO_x by more than 70% in Year 2023 when compared to Year 2010.
17. However, taking the annual average NO_x concentration of Tung Chung from 2010 to 2014, the mean reduction rate is about 0.8 microgram per cubic metre per year. With this rate, the predicted reduction in NO_x concentration is 10.4 microgram per cubic metre in 2023. From 2010 to 2014, the annual average NO₂ concentration in Tung Chung displays no obvious trend of increase or decrease.
18. In Section 3.5.6.11, reduction in NO₂ concentration are predicted ranging from 7-40 microgram per cubic metre, which may be over-optimistic when considering the past five year’s NO_x data.
19. Ozone is not considered as a key parameter in this assessment (Section 3.3) because
 - (a) Ozone is not a primary pollutant, i.e. the Project will not emit ozone directly.
 - (b) High ozone episodes happened in Tung Chung area occasionally under the influence of regional pollutants transportation.
 - (c) Traffic emissions due to the Project may reduce ozone concentrations in the immediate area along main roads.
20. Regarding the short-term air quality objective of ozone, Tung Chung general air quality monitoring station has never complied with since it was established in 1999. Even worse, in 11 out of 16 years Tung Chung gained the lowest compliance percentage. The past 16 year’s data show that high ozone episodes happening in Tung Chung are not occasional and deserve assessment in view of the large foreseen population.
21. It is also contradictory that traffic emission due to the Project will reduce ozone concentration even in the immediate area along main roads because all the Air Sensitive Receivers will receive a reduction of annual NO₂ as shown in Table 3.34a as predicted by the Report. That means the ozone scavenging capability of NO₂ is predicted to decrease. And hence, less ozone is assumed to be consumed by traffic NO₂ in the future and this will contribute to a predicted increase in ozone level.
22. The yearly average values of 2014-2015 showed that Tuen Mun, Yuen Long and Tung Chung (in descending order) have the most hours of AQHI ≥7. The API statistics from 1999-2013 also

showed that Tung Chung has the most hours of $API \geq 101$.

23. If only AQHIs reaching 10 and 10+ in 2015 are taken for analysis, Kwun Tong has the greatest number of hours followed by Tung Chung and Tuen Mun with 48, 47 and 40 hours respectively compared to Tung Chung, Tuen Mun and Yuen Long ranking top three in 2014.
24. Compared to the API records of 2000-2013, the General Stations had 4311 hours of $API \geq 101$ in 14 years with an average of 308 hours per year. Tung Chung was ranked first with 52 hours per year in average.
25. The air quality of Tung Chung is amongst the worst districts in Hong Kong but no aggressive measures are proposed in the Report.

Other issues

26. The vegetation and trees along the banks of Tung Chung River should be retained to protect against erosion, especially during high flow. The trees grown by the riverside of Tung Chung River were proved to be effective to stabilize the riverbank during the torrential rainstorm on 7 Jun, 2008 with over 500mm rainfall recorded in Tung Chung area.
27. During our ecological survey in 2015, a breeding population of dragonfly Mangrove Skimmer (*Orthetrum poecilops*) was discovered in the mangroves to the west of Wong Lung Hang river mouth, north of Yu Tung Road. Mangrove Skimmer is listed as "Vulnerable" by IUCN and locally rare but this population is not recorded in the Report. We opine that the "Commercial" zone in RODP will threat this population and change of zoning, inclusion of its habitat in River Park or other protection measures are needed.

Thank you very much for your kind attention. I look forward to your decision to protect Tung Chung River-cum-Bay.

Yours sincerely,



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