(Translated Version)

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LANTAU DEVELOPMENT ADVISORY COMMITTEE

Ecological Study for Pui O, Shui Hau, Tai O and Neighbouring Areas

PURPOSE

This paper aims to brief the Lantau Development Advisory Committee (LanDAC) on the progress of the Ecological Study for Pui O, Shui Hau, Tai O and their neighbouring areas.

BACKGROUND

2. To allow the Government to understand the existing ecological situation on Lantau for its implementation of appropriate conservation work, we commenced the "Ecological Study for Pui O, Shui Hau. Tai O and Neighbouring Areas - Feasibility Study" (the Study) in December 2017. The Study mainly aims to explore the feasible conservation options for the three priority sites[1], namely Pui O, Shui Hau and Tai O.

SCOPE OF STUDY

3. The Study first reviews and consolidates the existing ecological information of Pui O, Shui Hau, Tai O and other neighbouring areas (the Study Area) (please refer to Annex I), and then conducts the following work for various habitats within the Study Area:

[1] It was mentioned by the Chief Executive in the Policy Agenda in October 2017 that the Government would deploy different resources to take forward various appropriate countryside conservation initiatives in selected pilot areas on Lantau, such as Tai O, Shui Hau and Pui O, to support the efforts in developing and conserving Lantau.

Pui O, Shui Hau and Tai O Priority Sites

(a) Review the extent of ecological surveys for the three priority sites, conduct such surveys and assess the ecological impacts borne by these sites at present; and
(b) Propose feasible conservation options for the three priority sites.

Remaining Sites

(c) Conduct preliminary assessment on the ecological significance of each site and the needs of conducting ecological surveys; and
(d) Prioritise the sites that necessitate conducting ecological surveys and devise the implementation strategies.

PROGRESS OF THE STUDY

4. Upon the review and consolidation of the existing ecological information of the Study Area, and having considered the views of green groups and members of the Expert Group[2], we commenced 12-month ecological surveys for the three priority sites in March 2018, followed by the analysis of the ecological information collected during the surveys.

5. As for the ecological significance of the remaining sites in the Study Area, we have conducted preliminary assessments in this regard, and prioritised the sites that necessitate conducting ecological surveys/studies.

KEY FINDINGS OF THE STUDY

(A) *Ecological surveys*

Pui O

6. The survey results showed that there were various habitats of ecological significance in Pui O, including wetlands, streams and woodlands, etc., with rich biodiversity. During the survey, over 500 species of fauna and flora were recorded,

[2] The membership of the Expert Group comprises Dr. Cheung Siu-gin, Associate Professor of Department of Chemistry at the City University of Hong Kong, Dr. CHIU Sein-tuck, Professor of UOW College Hong Kong/Community College of City University and Prof LEE Shing-yip, Professor of School of Life Sciences at the Chinese University of Hong Kong.

including some species of conservation importance[3] (such as Golden Birdwing and Three-striped Grass Frog). Pui O has a sizeable chunk of representative lowland freshwater wetlands. Rarely found in Hong Kong, such wetlands serve as both resting and foraging grounds for wildlife, in particular wetland-dependent birds and amphibians, and also nurture some rare aquatic plants species (such as Water Fern). Among the wetlands, freshwater marshes are particularly important. It was found in the survey that such marshes, together with the adjoining habitats, served as important habitats for waterbirds on Lantau, including some of the migratory birds. Recognised as an Ecologically Important Stream, Pui O Stream connected with the adjoining wetlands very closely to perform various ecological functions. In addition, it was found in the survey that the area served as roosting sites or resting places for Short-nosed Fruit Bat and Eastern Cattle Egret, and overwintering danaidae butterflies.

Shui Hau

7. Shui Hau has a variety of habitats, including sandflats, wetlands, woodlands and streams of high ecological significance and is rich in biodiversity. During the survey, over 560 species of fauna and flora were recorded, including a number of rare or endangered species[4] (such as Romer's Tree Frog and Metallic Cerulean). In addition, the uninterrupted transition of natural habitats and natural landscapes from land to sea in Shui Hau are already very rarely found in Hong Kong. The sandflat in Shui Hau, a very unique habitat in Hong Kong, serves as an important breeding and nursery ground for the endangered Chinese Horseshoe Crabs. That said, the number of individuals recorded is fewer than the past. The diversity and abundance of other intertidal species are also impressive. In addition, the survey results showed that both the wetlands and sandflat not only served as the feeding grounds for waterbirds and raptors, but might also be a stopover for migratory birds, of which records of some of the species in Hong Kong are mainly from the wetlands of Mai Po and Inner Deep Bay. The diversity of aquatic plants in freshwater marshes is impressive, including a number of rare species (such as Ceylon Sphenoclea). The freshwater marshes also serve as important breeding grounds for amphibians and dragonflies. High diversity of butterfly species was recorded in woodlands and the adjoining habitats. The

[3] Reference: the List of Species under Statutory Protection, International Union for Conservation of Nature (IUCN) Red List of Threatened Species in Endangered Species, China Species Red List, Hong Kong Biodiversity Database maintained by the Agriculture, Fisheries and Conservation Department (AFCD), and the assessment results of Fellows et al. 2002.

[4] Reference: Species protected by local legislations, , International Union for Conservation of Nature (IUCN) Red List of Threatened Species China Species Red List, Hong Kong Biodiversity Database maintained by AFCD, and the assessment results of Fellows et al. 2002.

streams are important source of freshwater for wetlands and sandflat. Some species of fishes and crabs of conservation importance were recorded therein.

Tai O

8. There are various habitats of ecological significance in Tai O with rich biodiversity. Over 400 species of fauna and flora were recorded during the ecological survey. Habitats such as mangroves, marshes and reedbeds form a siganificant ecosystem particularly important to wetland birds on one hand, while providing habitats for some species of rare animals and plants, such as Four-Spot Midget, Small Cabbage White and Strength-vine. Among such habitats, the large area of natural mangrove forest opposite to Po Chue Tam, remaining relatively intact, is the one of particular importance. The mangrove forest consists of six of the eight true mangrove species in Hong Kong and has considerable potential for ecological enhancement. The reedbeds there, relatively large in size compared with others of its kind, is already uncommon in Hong Kong.

9. Upon consolidation of the existing ecological information on Pui O, Shui Hau and Tai O, followed by the analysis of the results from the 12-month ecological surveys above, the overall ecological significance of the three priority sites have been rated as "High", "Very High", and "Moderate to High" respectively.

(B) *Prioritisation of ecological surveys in the next stage*

10. With regard to the prioritisation of ecological surveys on the remaining sites in the Study Area, we preliminarily assessed the ecological significance of such sites by means of review of existing ecological information and on-site surveys. We deemed it necessary to conduct detailed ecological surveys on both the sites with ecological significance rated as "Moderate to High" and those without ecological information at present. Such sites have been categorised into 16 areas having regard to their ecological and geographical connectivity. Subsequently, we determined the priorities of the ecological surveys or studies in the next stage based on several key factors, including ecological significance, availability of existing ecological information, current developments and threats met by the ecology, current level of protection, etc. It was proposed under the Study that the ecological surveys should be conducted for these 16 areas in three batches (please refer to Annex II).

FOLLOW UP WORK AND WAY FORWARD

11. The consultants are conducting an assessment on the ecological impacts borne by the three priority sites at present and will recommend appropriate conservation measures. The measures under consideration include the provision of conservation management in the locations of higher ecological significance in the three priority sites, such as restoring the gradually degraded wetlands, removing invasive species; and the implementation of environmentally compatible activities in other locations of the priority sites, such as eco-tourism, educational and sustainable recreational activities, with a view to allowing the public to enjoy the natural resources of Lantau. The Study is anticipated to be completed in the first quarter of 2020.

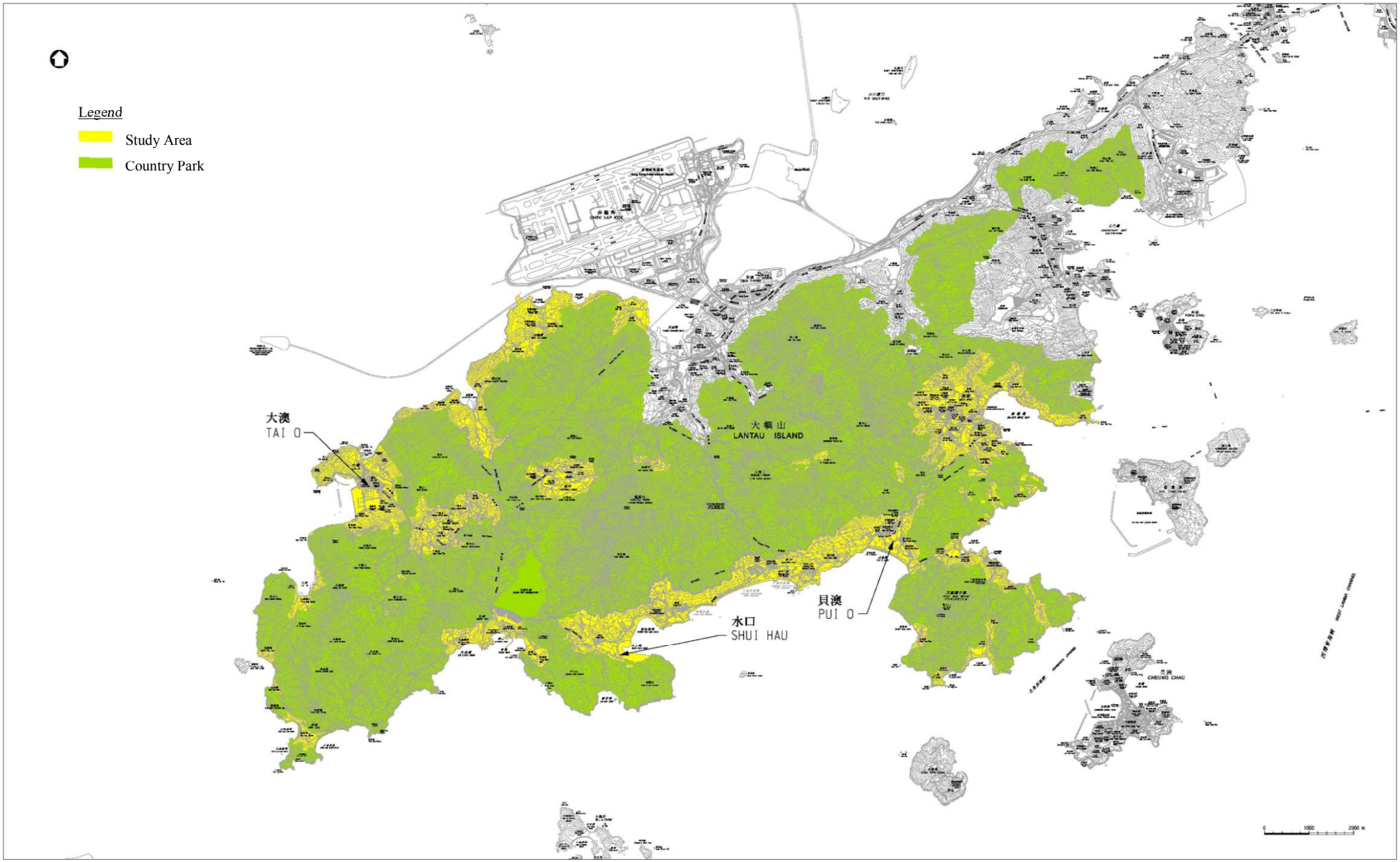
12. Subject to the study results, we will further explore the implementation of the conservation work for the three priority sites. We will also conduct ecological surveys on the sites specified in Annex II in batches. In tandem, we will continue to take forward the current conservation work, including the preparation for setting up the Lantau Conservation Fund. We will maintain communication with relevant stakeholders in the process.

CONCLUSION

13. Members are invited to note the progress of the Ecological Study for Pui O, Shui Hau, Tai O and Neighbouring Areas.

Civil Engineering and Development Department
January 2020

Ecological Study for Pui O, Shui Hau, Tai O and Neighbouring Areas – Study Area



Annex II

Prioritisation of Ecological Surveys for the 16 areas in the Study Area

Batch One (four locations)

- San Tau
- From Sha Lo Wan to Sham Wat
- Yi O
- Shap Long

Batch Two (five locations)

- Tai O (excluding the Tai O Priority Site)
- Ngong Ping
- Mui Wo
- Shui Hau (excluding the Shui Hau Priority Site)
- Tei Tong Tsai

Batch Three (seven locations)

- Tsin Yue Wan
- Fan Lau
- Shek Pik
- Lung Tsai Ng Yuen and Man Cheung Po
- Keung Shan
- Yi Tung Shan
- Chi Ma Wan