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For Advice

Environmental Impact Assessment Ordinance (Cap.499) Environmental Impact Assessment Report Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvement, Stage 1, Phase 2B – Kam Tin Secondary Drainage Channel KT13

Purpose

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Improvement, Stage 1, Phase 2B – Kam Tin, Secondary Drainage Channel KT13 (hereafter known as the Project), submitted under section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) with the application no. EIA-122/2006. The Drainage Services Department (the applicant) and their consultants will make a presentation. Comments from the public and the Council will be taken into account by the Director of Environmental Protection when he makes the decision on the approval of the EIA report under the EIAO.

Advice Sought

2. Members' views are sought on the findings and recommendations of the EIA report.

Need for the Project

3. The Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Master Plan Study identified flooding problems in Ma On Kong. The Project is part of the recommendations of the study for upgrading the existing drainage capacity to alleviate local flooding problems.

Description of the Project

4. An existing stream in Ma On Kong will be trained in order to alleviate flooding problems. The Project includes the following key items of work [see Figure 1 and Figure 2 attached]:

- About 700m of the stream will be widened and deepened to trapezoidal channels with gabion bank and bed (Section A and Section B).
- About 400m of the bypass culvert, which is a twin cells concrete box culvert, will be constructed to connect two open channel sections.
- About 25m of the meander will be modified.
- Ancillary infrastructure, such as vehicular/pedestrian crossing, maintenance access, etc., will also be constructed along the channel alignment.

5. The Project is classified as a designated project under Item I.1(b)(vii) '*a drainage channel or river training and diversion works which discharge into an area which is less than 300 m from the nearest boundary of an existing conservation area*' and Item Q.1 '*a project partly in an existing conservation area*', Part I, Schedule 2 of the EIAO.

Consideration of Alternative Alignments, Channel Lining Options and Construction Methods

6. Regarding the bypass culvert passing through a "Conservation Area" ("CA") zone, the applicant considered 4 alignment options during the preparation of the EIA report. Having considered the engineering factors and the environmental aspects of the Project, the applicant selected the current alignment option that would completely avoid the current location of the Ho Pui Egrettry and the majority of the "CA" zone.

7. Environmentally friendly design measures would be adopted in the Project. They include the use of gabion riverbank and streambed, preservation and re-creation of meander, management and maintenance of water level/water table, etc. The maintenance access above the proposed bypass culvert will not be open for public use. Grassed cellular concrete paving will be provided at the section of the maintenance access within the "CA" zone.

8. The bypass culvert will be constructed by conventional open-cut method. This method is commonly adopted in Hong Kong. The environmental impact from the

construction stage can be controlled with relevant mitigation measures in place.

Specific Environmental Aspects to Highlight

Ecological Issue

9. The current location of the Ho Pui Egrettry is close to the proposed bypass culvert. Part of the proposed bypass culvert also encroaches into the “CA” zone on the Kam Tin South Outline Zoning Plan [see Figure 3 attached]. The area of the “CA” zone to be affected by the Project is about 420m² and it is of grassland habitat.

10. The works boundary of the proposed bypass culvert is adjacent to the current location of the Ho Pui Egrettry. In order to minimize potential ecological impacts during the construction stage, some ecological mitigation measures are recommended and highlighted below:

- A ‘no construction works’ period is proposed between March and May at the works area within 100m of the egrettry [see Figure 3 attached]. Monitoring would be conducted as part of the EM&A programme during the period in order to establish if breeding egrets are present. If no egret nest is found at the Ho Pui Egrettry and the approval from AFCD and EPD is obtained, the construction works can be carried out starting from June to the next February. Otherwise, the ‘no construction works’ period should be extended till the end of September.
- Chain link fence will be erected along the site boundary near the “CA” zone and the Ho Pui Egrettry [see Figure 3 attached]. Signage will also be provided at conspicuous locations to warn workers from entering and disturbing ecological sensitive areas.
- *Bambusa eutuldoides* will be planted in a staggered double row as shown on Figure 3, as a screen along the east side of the bypass culvert.
- A section of the meander to be modified will be re-created with gabion banks and natural substrate streambed.

11. The encroachment on the “CA” zone has been reduced to minimum in the design. With the ecological mitigation measures in place, there would be no significant permanent residual ecological impact arising from the construction and the operation of the Project.

Other Environmental Impacts

12. The EIA report also assessed the impacts of air quality, construction noise, water quality, waste management and cultural heritage, and recommended necessary landscape design to minimize the impacts of landscape and visual quality. The assessments concluded that, with appropriate mitigation measures in place, the anticipated environmental impacts could be controlled within the requirements of the Technical Memorandum on Environmental Impact Assessment Process.

Environmental Monitoring and Audit (EM&A)

13. The EIA report includes an EM&A Manual which recommends an EM&A programme during both the construction and operation phases of the Project.

Public Consultation

14. The applicant has applied the Continuous Public Involvement process and consulted some green groups, Yuen Long District Council, Pat Heung Rural Committee and Village Representatives to seek their comments on the Project during the preparation of the EIA report.

15. The applicant has also made the EIA report, EM&A Manual and Executive Summary available for public comment under the EIAO on 22 August 2006. Members will be briefed on any comments received from the public at the meeting.

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Environmental Assessment Division

Environmental Protection Department