

**Environmental Impact Assessment Ordinance (Cap.499)**  
**Environmental Impact Assessment Report**  
**Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 2**

**Purpose**

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 2 (hereafter known as the Project), submitted under section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) with the application no. EIA-094/2004. Drainage Services Department (the applicant) and their consultants will make a presentation. Comments from the public and the ACE 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 Project and two other sewerage projects (i.e. the Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 1 and the Upgrading and Expansion of San Wai Sewage Treatment Works and Expansion of Ha Tsuen Pumping Station) were recommended under the "Review of Yuen Long and Kam Tin Sewerage and Sewage Treatment Requirements" (YLKTSMP Review) completed in early 1999. The ACE was consulted on the EIA Report "Yuen Long and Kam Tin Sewerage and Sewage Disposal Stage 1" and the report was endorsed with conditions by the ACE on 29 July 2002. The EIA Report was approved with conditions under the EIAO on 26 August 2002. Another EIA Report for "Upgrading and Expansion of San Wai Sewage Treatment Works and Expansion of Ha Tsuen Pumping Station" was endorsed without conditions by the ACE on 14 April 2003 and approved without conditions under the EIAO on 12 May 2003.

4. The Project is to implement the sewerage extension to cope with the existing and planned developments in the Northwest New Territories. With the completion of the Project, the untreated village sewage/new development flows within the planned catchment will be treated and then diverted away from Yuen Long Sewage Treatment Works after the secondary treatment, via San Wai Sewerage Treatment Works with the centralization disinfection, to the outfall at Urmston Road.

### **Description of the Project**

5. The Project includes the follow key items of works (Figure 1) :

- the provision of a pumping system for conveying treated effluent from Yuen Long Sewage Treatment Works to San Wai Sewage Treatment Works;
- the provision of a trunk sewerage system consisting of gravity sewers, rising mains and pumping stations for San Tin areas, for conveying sewage to Yuen Long Sewage Treatment Works via another downstream trunk sewerage system;
- the provision of a trunk sewerage system consisting of gravity sewers, rising mains and pumping stations for Lau Fau Shan areas, to San Wai Sewage Treatment Works; and
- the provision of a trunk sewerage system consisting of gravity sewers, rising mains and pumping stations for Yuen Long South areas for collection and conveyance of sewage generated from the areas to San Wai Sewage Treatment Works via another trunk sewerage system and the existing Ha Tsuen Pumping Station.

6. The Project will construct a sewerage system of about 28km long and 15 sewage pumping stations. The majority part of the proposed sewers will be laid underneath existing or future roads. Among the works items, there are 3 designated projects (Figure 2 and Figure 3). They are described as follows:

- (a) the Yuen Long Effluent Pumping Station (YLEPS) at the north of Yuen Long Sewage Treatment Works - by virtue of Item Q.1 of Schedule 2, Part I under the EIAO (encroaching the Conservation Area under the Lau Fan Shan and Tsim Bei Tsui Outline Zoning Plan);
- (b) a section of the twin rising mains at the northwestern side of Yuen Long Sewage Treatment Works - by virtue of Item Q.1 of Schedule 2, Part I under the EIAO (encroaching the Conservation Area under the Lau Fan Shan and Tsim Bei Tsui Outline Zoning Plan) ; and

- (c) the Ngau Tam Mei Sewage Pumping Station - by virtue of F.3(b) of Schedule 2, Part I under the EIAO (with the installed capacity, in terms of dry weather flow, of more than 2000m<sup>2</sup> per day and a boundary of which is less than 150m from an existing residential area).

## **Key Environmental Aspects to Highlight**

### Ecological Issue

#### *Habitats to be disturbed/lost*

7. The proposed YLEPS is located at the edge and within the Wetland Conservation Area (WCA) (Figure 2). About 430m of twin rising mains falls on the margin of the WCA on the eastern boundary of Yuen Long Sewage Treatment Works (Figure 2). The proposed mains will be laid underneath the earth bund of the fishponds. There will be temporary loss of 0.2ha fishponds, which will be reinstated after the construction works (Figure 4). Thus there will be no-net-loss of wetland area at the WCA and the potential impact to the fishponds will be minimal.

8. 0.23ha of the mitigation plantation area under the 60CD Main Drainage Channel (MDC) project will be affected by the YLEPS. The plantation now includes young trees of common species and of simple structure. The potential ecological impact due to the loss of the mitigation plantation area is considered minor.

#### *Ecological Mitigation Measures and Compensation Planting*

9. Regarding the construction of the proposed YLEPS and the section of the twin rising mains, mitigation measures are recommended as below:

- (a) the construction of YLEPS and the section of twin rising mains on the margin of WCA will be restricted to April through October to avoid the potential disturbance to wintering waterbirds (Figure 4);
- (b) the laying of the twin rising mains will be conducted in 20m segment to reduce the potential impact on the nearby fish ponds;
- (c) appropriate construction method will be adopted to ensure no dewatering of nearby fishponds is required.

10. A replanting area located at Shan Pui ponds (Figure 4) will be provided to compensate for the loss of the mitigation plantation area under the 60CD MDC project on a like-to-like basis using suitable native species. About 0.35ha will be planted at a

1.5:1 compensation ratio to offset the time loss and to cover natural mortality during establishment.

### Odour

11. Computer dispersion modelling has been undertaken to assess the potential operational phase air quality impacts due to odour emission from the sewage pumping stations. The proposed YLEPS is designed to convey the treated effluent with minimal odourous substances to the San Wai Sewage Treatment Works and will not be a significant odour source. In addition, the distance of the nearest air sensitive receiver to the proposed YLEPS is more than 400m. Odour mitigation measures have been recommended for all the proposed sewage pumping stations. The odour removal system, e.g. activated carbon filters, with H<sub>2</sub>S removal efficiency of not less than 99.5% will be installed at sewage pumping stations of relatively large sizes including the YLEPS and stations at 2A-2T and 2B-1T. Meanwhile, odour removal system of not less than 95% will be installed at all the sewage pumping stations at 2A-3T and 2B-2T (Please refer to Figure 1 for the sewage pumping stations). The wet wells and the screening collection areas should be enclosed in a building structure. The discharge point of the odour removal system should be directed away from the adjacent sensitive uses.

### Water Quality

12. During the operation of the project, the untreated sewage flows will be treated and then diverted away from the Yuen Long Sewage Treatment Works to the San Wai Sewage Treatment Plant. It will result in improvement of water quality both the inland and marine waters in the North Western Water Control Zone and the Deep Bay Water Control Zone after the treatment at the San Wai Sewage Treatment Plant.

### Other Environmental Impacts

13. The EIA Report also assessed the noise, waste management, land contamination, landscape and visual as well as the impact on the cultural heritage. The assessments concluded that, with appropriate mitigation measure in place, the environmental impacts could be considered acceptable.

### **Environmental Monitoring and Audit (EM&A)**

14. An EM&A programme has been proposed in the EM&A Manual submitted together with the EIA Report and included an Implementation Schedule. The EM&A requirements will be enforced as Environmental Permit conditions.

## **Public Consultation**

15. The applicant has made the EIA report, EM&A Manual and Executive Summary available for public comment under the EIAO on 23 April 2004. Members will be briefed about any comments received from the public at the meeting.

**April 2004**

**Environmental Protection Department**