

NOTE FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

Supplementary Information on 51DP – Environmental improvement of Shing Mun River

INTRODUCTION

When considering PWSC(2002-03)85 on **51DP** at the Public Works Subcommittee meeting held on 29 January 2003, Members requested the Administration to provide supplementary information on –

- (a) the respective numbers and names of sewered and unsewered villages within the catchment of Shing Mun River (the River); and
- (b) the implementation timetable and coverage of the Tolo Harbour Stage 2 sewerage scheme and the extent of improvement on the water quality of the River upon completion of this Stage 2 sewerage scheme.

THE ADMINISTRATION'S RESPONSE

Sewered and unsewered villages within the catchment of the River

2. The River catchment covers altogether 69 villages. Of these, 26 villages with a total estimated population of 17 020 have already been connected with public sewerage facilities under three individual projects grouped under Stage 1 of "Tolo Harbour sewerage of unsewered areas"¹(see Enclosure 1).

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¹ They are namely **163DS** "Tolo Harbour sewerage of unsewered areas, stage 1 phase 1A", **284DS** "Tolo Harbour sewerage of unsewered areas, stage 1 phase 1C" and **213DS** "Tolo Harbour sewerage of unsewered areas, stage 1 phase 2A". The stage 1 phase 1B works do not cover the River catchment.

3. For the remaining 43 unsewered villages with a total estimated population of 10 430 (see Enclosure 2), the domestic sewage is partially treated by private treatment facilities² before being discharged into the ground at present. Works are already being undertaken under the Stage 1 sewerage scheme to connect another seven unsewered villages with public sewerage facilities. Separately, the Home Affairs Department is improving the sewerage system for one village within the River catchment area. By completion of all these works in 2004, the total number of seweraged villages within the River catchment area would be increased to a total of 34 with a total estimated population of 20 610. We have been prioritising some of these unsewered villages for inclusion in our phased sewerage connection programmes, taking into consideration factors such as the effectiveness of the private treatment facilities within the unsewered villages, their respective contribution to the pollution loads of the River and Tolo Harbour, and the cost-effectiveness and engineering viability of the proposed sewerage connection works.

Stage 2 of 125DS -Tolo Harbour Sewerage of unsewered areas

4. In the light of the outcome of these on-going sewerage improvement works and the latest findings in the on-going Review of the North District and Tolo Harbour Sewerage Master Plans, the Administration will further evaluate the scope, feasibility and timing for implementation of the Stage 2 sewerage scheme with a view to providing necessary sewerage connection to the unsewered villages within the River catchment. Subject to the availability of funds, completion of all statutory procedures and resolution of land resumption matters, we tentatively plan to commence construction of the Stage 2 works in 2005 - 06 for progressive completion in 2008 - 09.

Long-term improvement in water quality of the River

5. Following declaration of the Tolo Harbour and Channel Water Control Zone under the Water Pollution Control Ordinance in 1987, implementation of the revised Livestock Waste Control Scheme in 1994, and phased provisions of sewerage network for unsewered villages under Tolo

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² These treatment facilities are mainly septic tanks and soakaway systems in village houses. The effectiveness of these facilities in removing pollutants depends on their size, whether they are located in areas where the ground conditions are suitable for the soakaway systems to work properly, and whether there is adequate maintenance of the systems.

Harbour Stage 1 sewerage scheme since 1995, the pollution load in terms of Biochemical Oxygen Demand³ (BOD) discharging into the River has been sharply reduced by 94% from 9 000 kilograms (kg) per day in 1987 to 550 kg per day at present. The Water Quality Index of the River has also been improved from “fair” or “bad” levels in the past to a “good” grading in 2002, with some tributaries showing “excellent” level of water quality. The remaining Stage 1 works, to be fully completed by 2004, will further bring down the estimated BOD load to 440 kg per day (or 4.9% of the 1987 loading). Depending on the scope of the eventual Stage 2 sewerage scheme, it may further lower the BOD load by a maximum of 195 kg per day down to 245 kg per day⁴, which represents only 2.7% of the 1987 loading. Considering the natural assimilative capability of the River, together with the enforcement efforts of the Environmental Protection Department and the support of the community in guarding against illegal discharge, we would expect further improvement in water quality of the River in future.

Environment, Transport and Works Bureau
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³ As a generally accepted indicator of the organic pollution loads in water, Biochemical Oxygen Demand measures the amount of oxygen utilised by the microorganisms to degrade the organic matters available in a water sample over a 5-day period.

⁴ The residual loads include discharges of treated effluent governed under a licence, discharges from the remaining villages yet to be included in any existing or planned sewerage schemes due to remoteness or cost-effectiveness reasons, and some discharges from individual houses in sewered areas which cannot be connected to public sewers due to physical constraints or other topographical reasons, etc.

**List of Sewered Villages in Shing Mun River Catchment
(as at end of December 2002)**

Sewerage works completed under 163DS "Tolo Harbour sewerage of unsewered areas, stage 1 phase 1A" and 284DS "Tolo Harbour sewerage of unsewered areas, stage 1 phase 1C" (Total estimated population: 12 850)	
No.	Name of Village
1.	Heung Fan Liu (East)
2.	Kak Tin
3.	Ha Keng Hau
4.	Sheung Keng Hau
5.	Hin Tin
6.	Tai Wai
7.	Sha Tin Wai
8.	Sha Tin Tau Village
9.	To Shek
10.	Chap Wai Kon Village
11.	Ngau Pei Sha New Village
12.	Pak Tin
13.	Tin Sam
14.	Tsang Tai Uk
15.	Chap Wai Kon New Village
16.	Heung Fan Liu (West)
Sewerage works completed under 213DS "Tolo Harbour sewerage of unsewered areas, stage 1 phase 2A" (Total estimated population: 4 170)	
17.	Tai Lam Liu
18.	Tai Shui Hang
19.	Fo Tan Cottage Area
20.	Wo Liu Hang
21.	Fo Tan
22.	Pai Tau
23.	Tung Lo Wan
24.	Pat Tsz Wo
25.	Shek Kwu Lung
26.	Wong Nai Tau

**List of Unsewered Villages in Shing Mun River Catchment
(as at end of December 2002)**

Sewerage works to be completed by April 2004 under 328DS "Tolo Harbour sewerage of unsewered areas, stage 1 phases 1D and 2B" (Total estimated population: 2 490)	
No.	Name of Village
1.	Hung Mui Kuk
2.	To Fung Shan
3.	Ha Wo Che
4.	Sheung Wo Che
5.	Ho Tung Lau
6.	Lok Lo Ha
7.	Wong Chuk Yeung
Future tentative sewerage works under 215DS "Tolo Harbour sewerage of unsewered areas, stage 2" (Total estimated population: 4 820)	
8.	Kau To
9.	Ma Niu
10.	Kwai Tei New Village
11.	Tin Liu, Lai Chi Yuen
12.	Shatin Tau New Village
13.	Tsok Pok Hong
14.	Fui Yiu Ha
15.	Siu Lek Yuen
16.	Shatin Fisherman's New Village
17.	Shatin Heights
Sewerage upgrading and expansion works to be completed by 2003 under block allocation Subhead 7014CX "Improvement of sewerage system at Tai Wai New Village, Sha Tin" by Home Affairs Department (Total estimated population: 1 100)	
18.	Tai Wai New Village
Villages have yet to be included in any existing or planned sewerage schemes due to remoteness or cost-effectiveness reasons (Total estimated population: 2 020)	
19.	Au Pui Wan
20.	Che Kung Mui
21.	Fa Sam Hang
22.	Fu Yung Pit

23.	Ho Lek Pui
24.	Kong Pui Tsuen
25.	Kwun Yam Shan
26.	Kwun Yam Shan Tsuen
27.	Lei Uk Tsuen
28.	Man Hang
29.	Mau Tat
30.	Mau Tso Ngam
31.	Nam Shan
32.	Pai Tau Hang
33.	Pak Hok Ting
34.	Shan Mei
35.	Shap Yi Wat
36.	Tai Che
37.	Wong Uk Village
38.	Yau Oi Tsuen
39.	Yiu Dau Ping
40.	Tse Uk Tsuen
41.	Tso Tui Ha
42.	Mui Tze Lam
43.	Ngau Pei Sha Village