

ETWB(E) 55/10/161 Pt 44

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10 April 2003

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Clerk to the LegCo Panel on
Environmental Affairs
LegCo Secretariat
3/F, Citibank Plaza
Garden Road
Hong Kong
(Attn : Mrs Mary Tang)

Dear Mrs Tang,

I refer to the Conservancy Association's submission attached to your letter of 9 April 2003 and would like to respond to the questions therein as follows.

Cost effectiveness

The total project cost of \$250.4 million for 208DS "Outlying Islands sewerage, stage 1 phase 1 part 1 – Ngong Ping sewerage, sewage treatment and disposal" covers not only the cost of the Ngong Ping Sewage Treatment Works (NPSTW), but also the construction of the trunk and branch sewers of about 0.65 km, and the twin effluent export pipeline of about 5.7 km for discharging the sewage to the Southern Waters at Tung Wan. As detailed in paragraph 8 of the Panel paper, the construction cost of the sewage treatment works is \$153 million, of which \$96 million is used for civil works while the remaining \$57 million is used for electrical and mechanical works. The civil works cover

mainly the site formation, the excavation of rocks, and construction of the sewage treatment tanks, the emergency effluent storage tanks, the buildings for housing the electrical and mechanical equipment and the landscaping works. The electrical and mechanical works include the provision and installation of sewage pumps, the aeration equipment for biological treatment, the dual media filters, the UV lamps for disinfection, the power supply system and the control equipment.

The NPSTW is the **first** tertiary treatment plant in Hong Kong. Since the treatment works is located within the water gathering grounds of the Shek Pik reservoir which is the sole source of water supplies for Lantau, we decide to adopt a higher treatment level to protect against accidental spillage. Moreover, tertiary treatment is also required to meet the stringent standards for discharge to the inshore marine waters. As the tertiary treatment process is more complicated than the secondary treatment process in general, the NPSTW is comparatively more expensive than other existing secondary treatment works in Hong Kong. The higher cost can also be attributable to the remoteness of the site, the specific ground conditions which cause difficulties in rock excavation, and the need to cater for highly fluctuating sewage flows due to significantly more visitors being expected on holidays. In fact, the need to provide large emergency storage tanks to protect the nearby water gathering grounds during emergency maintenance alone will cost some \$25 million.

Resource Utilization

The proposal to reuse the treated effluent produced by the NPSTW is the first pilot scheme to take forward the policy initiative announced in the 2003 Policy Address to implement a Total Water Management programme with a view to enhancing water conservation and water resource protection. The aim of the scheme is to provide key information on technical, financial, legal and environmental issues that have to be addressed before consideration can be given to pursue reuse of treated effluent in other areas of the territory. To ensure that the pilot scheme will be implemented successfully, the Administration has set up an inter-departmental working group to take it forward .

Under the pilot scheme, effluent from the NPSTW will be supplied to the public toilets for toilet flushing. The working group is also discussing with

the Mass Transit Railways Corporation Limited on the possibility of exploiting other non-potable reuse opportunities, such as for toilet flushing and landscape irrigation in the cable car terminal and related development. It is expected that the valuable data obtained and the experience gained through this pilot scheme would enable the Administration to examine the feasibility of extending effluent reuse from sewage treatment works to other areas of Hong Kong.

As the pilot scheme is the first formal effluent reuse trial in Hong Kong, we consider it prudent to allow more time for the public to accept other more sensitive effluent reuse options. Therefore, we intend to confine the initial scope to toilet flushing and potentially landscape irrigation. As effluent reuse is an important step in the Total Water Management programme, we consider the additional cost of enhancing the treatment level to bring the effluent suitable for its intended purposes well justified.

Yours sincerely,

(Raistlin Lau)

for Secretary for the Environment, Transport and Works

c.c. Conservancy Association