

**For information****Legislative Council Panel on Planning, Lands and Works****238WF - Mainlaying between Sham Tseng and So Kwun Tan****PURPOSE**

This paper briefs Members on the proposal to upgrade part of **238WF** "Mainlaying between Sham Tseng and So Kwun Tan" to Category A, at an estimated cost of \$45 million in money-of-the day (MOD) prices, to improve the reliability of fresh water supply to the residents in Sham Tseng and Tuen Mun East areas<sup>1</sup>.

**BACKGROUND**

2. Currently, each of the Sham Tseng and Tuen Mun East areas is served by an isolated fresh water supply system. In the event of a failure in their respective systems, no alternative water supply can be arranged. To enhance the reliability of fresh water supply to these two areas, we need to link up the two systems and adjacent supply network.

3. The project **238WF** was included in Category B in September 1998. The full scope of works under **238WF** comprises the laying of about 10 kilometres (km) of fresh water mains of diameter 1 000 millimetres (mm) along Castle Peak Road from Sham Tseng to So Kwun Tan via Ka Loon Tsuen and Siu Lam. It was part-upgraded to Category A in January 2001 as **259WF** "Mainlaying between Sham Tseng and Ka Loon Tsuen" for laying about 3.5 km of water mains to tie in with the roadworks programme<sup>2</sup> in Castle Peak Road. The mainlaying works under **259WF** are now in progress for completion in the second quarter of 2007.

**PROPOSAL**

4. The proposed works for part-upgrading to Category A comprise the laying of about 2.8 km fresh water mains of diameter 1 000 mm along Castle Peak Road between Siu Lam and So Kwun Tan. A site plan, Sketch No. SK62006/041, showing the proposed works is at **Enclosure 1**.

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<sup>1</sup> Sham Tseng area covers Sham Tseng, Ma Wan and Tsing Lung Tau. Tuen Mun East area comprises the areas from Sam Shing Estate to Tai Lam Chung.

<sup>2</sup> The mainlaying works under **259WF** are being executed as part of the roadworks contract under **553TH** "Castle Peak road improvement between Sham Tseng and Ka Loon Tsuen".

5. We intend to start the proposed works in April 2007 for completion in early 2010. The works will be supervised by in-house staff.

6. We will take into account the progress in different stages of mainlaying works on site and continue to plan the implementation programme for the remaining section from Ka Loon Tsuen to Siu Lam, with a view to minimizing the impact on traffic along Castle Peak Road.

## JUSTIFICATION

7. At present, the Sham Tseng area covering a population of 36 000 is served by an isolated water supply system with water sourced from Sham Tseng Water Treatment Works. The Tuen Mun East area covering a population of 48 000 is served by another separate supply system with water sourced from Tuen Mun Water Treatment Works. In case either one of the systems fails, there will be no alternative water supply to serve the respective areas.

8. We propose to link up the above two systems to safeguard the reliability of water supply. On completion of all works under **238WF**, the proposed integration will enable the transfer of water supply from Sham Tseng to Tuen Mun East and vice versa in times of need.

## FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the proposed works to be \$45 million in MOD prices made up as follows: -

|                                       | <b>\$ million</b>    |
|---------------------------------------|----------------------|
| (a) Mainlaying                        | 40.5                 |
| (b) Environmental mitigation measures | 0.4                  |
| (c) Contingencies                     | 4.1                  |
| Total                                 | 45.0 (in MOD prices) |

10. We estimate the annual recurrent expenditure arising from **238WF** to be about \$162,000.

## ENVIRONMENTAL IMPLICATIONS

11. This is not a designated project under Environmental Impact Assessment Ordinance (Cap 499). The project would have no long-term environmental impact. We will control short-term construction impacts through the implementation of standard pollution control measures. We have included \$0.4 million in the project estimate for the implementation of these mitigation measures and will incorporate these requirements in the works contract.

12. We have considered the alignment and level of the proposed water main in the planning and design stages to reduce the generation of construction and demolition (C&D) materials where possible. In addition, we will require the contractor to reuse inert C&D materials (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of C&D materials to public fill reception facilities<sup>3</sup>. We will encourage the contractor to maximise the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimise the generation of construction waste.

13. We will also require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill and C&D waste to public fill reception facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

14. We estimate that the proposed works will generate about 14 000 tonnes of C&D materials. Of these, we will reuse about 7 200 tonnes (51.4%) on site, and deliver 6 760 tonnes (48.3%) to public fill reception facilities for subsequent reuse and will dispose 40 tonnes (0.3%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be \$187,520 for this project (based on the cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne<sup>4</sup> at landfills).

15. The proposed works will not involve any tree removal or planting proposal.

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<sup>3</sup> Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

<sup>4</sup> This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m<sup>3</sup>), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

## **TRAFFIC IMPLICATIONS**

16. We will closely liaise with the Transport Department, the Hong Kong Police Force, the Highways Department and the Tuen Mun District Office, and implement temporary traffic management schemes to minimise impacts on traffic during construction. We will display notice boards on site to explain the reasons for temporary traffic arrangements and to show the expected completion date of the concerned section of works. In addition, we will set up telephone hotlines for public enquiries or complaints.

## **PUBLIC CONSULTATION**

17. We consulted the Tuen Mun District Council on 20 January 2006. The Council supported the proposed works.

## **LAND ACQUISITION**

18. The proposed works does not require any land acquisition.

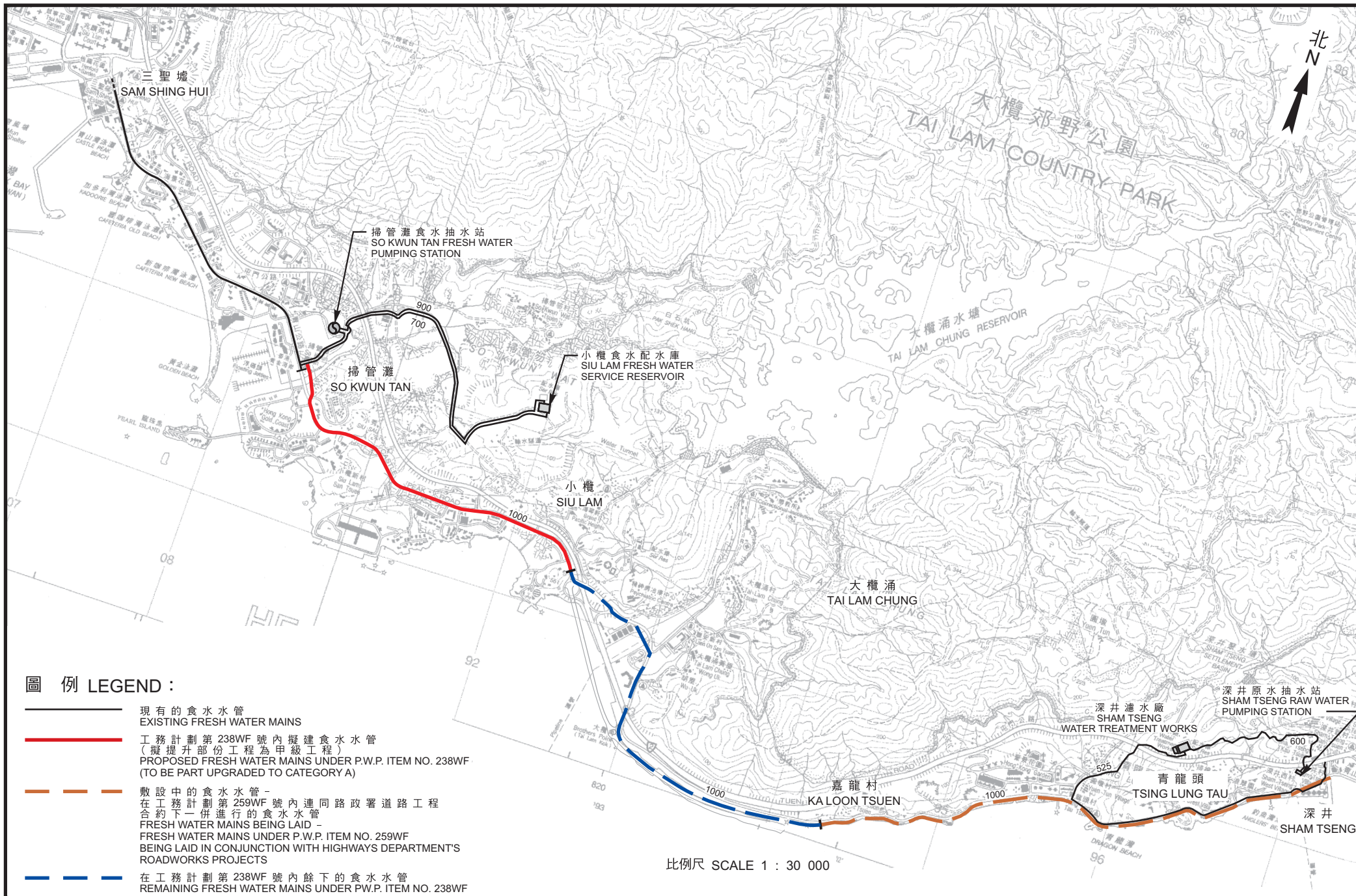
## **JOB CREATION**

19. We estimate that the proposed works will create about 27 jobs (23 for labourers and another four for professional/technical staff) providing a total employment of 830 man-months.

## **WAY FORWARD**

20. We intend to submit our proposal of part-upgrading **238WF** to Category A for consideration by the Public Works Subcommittee in November 2006, with a view to seeking funding approval from the Finance Committee in December 2006.

**Environment, Transport and Works Bureau**  
**October 2006**



圖例 LEGEND :

- 現有的食水水管  
EXISTING FRESH WATER MAINS
- 工務計劃第 238WF 號內擬建食水水管  
(擬提升部份工程為甲級工程)  
PROPOSED FRESH WATER MAINS UNDER P.W.P. ITEM NO. 238WF  
(TO BE PART UPGRADED TO CATEGORY A)
- - - 敷設中的食水水管 -  
在工務計劃第 259WF 號內連同路政署道路工程  
合約下一併進行的食水水管  
FRESH WATER MAINS BEING LAID -  
FRESH WATER MAINS UNDER P.W.P. ITEM NO. 259WF  
BEING LAID IN CONJUNCTION WITH HIGHWAYS DEPARTMENT'S  
ROADWORKS PROJECTS
- - - 在工務計劃第 238WF 號內餘下的食水水管  
REMAINING FRESH WATER MAINS UNDER P.W.P. ITEM NO. 238WF

比例尺 SCALE 1 : 30 000

核准 APPROVED  
  
 總工程師/設計 CE / Des  
 16/10/2006

工務計劃項目第238WF號 — 深井至掃管灘水管敷設工程  
 PWP ITEM NO. 238WF — MAINLAYING BETWEEN SHAM TSENG AND SO KWUN TAN

 水務署  
 WATER SUPPLIES DEPT.  
 草圖編號 SK 62006 / 041  
 SKETCH NO.

附件 1  
 ENCLOSURE 1