

**For information**

**Legislative Council Panel on Planning, Lands and Works  
109CD – Drainage improvement works in Tai Po**

**PURPOSE**

This paper briefs Members on the Administration's proposal to part-upgrade **109CD** "Drainage improvement works in Tai Po" to Category A at an estimated cost of about \$87 million in money-of-the-day (MOD) prices for urban drainage improvements works in Tai Po.

**BACKGROUND**

2. In October 1999, we completed a comprehensive review of the drainage systems in Sha Tin and Tai Po under **79CD** "Stormwater drainage master plan study in Sha Tin and Tai Po" (the Study). The Study has identified that some of the existing drainage systems in Sha Tin and Tai Po are inadequate to meet the required flood protection standard and recommended a programme of drainage improvement works to tackle the flooding problems in the areas.

3. In September 2000, we included **109CD** "Drainage improvement in Sha Tin and Tai Po" in Category B for implementing the drainage improvement works recommended under the Study. The proposed works included the urban drainage improvement works in Sha Tin and Tai Po and the river improvement works for Upper Lam Tsuen River, She Shan River and Upper Tai Po River in Tai Po.

4. In June 2001, we part-upgraded **109CD** to Category A as **115CD** entitled "Drainage improvement in Sha Tin and Tai Po – consultants' fees and investigations" for engaging consultants to undertake the site investigations, environmental impact assessment, traffic impact assessment and detailed design for **109CD**. The consultancy commenced in February 2002.

5. In February 2005, we part-upgraded **109CD** to Category A as **136CD** "Drainage improvement works in Sha Tin" for carrying out the urban drainage improvement works in Sha Tin. The construction works commenced in March 2005 for completion in December 2007.

6. We have substantially completed the detailed design for the urban drainage improvement works in Tai Po and plan to start the construction of the above proposed works in end 2005 for completion in end 2008. The planning and design of the remaining river improvement works for Upper Lam Tsuen River, She Shan River and Upper Tai Po River is underway.

## PROPOSAL

7. The scope of the proposed urban drainage improvement works in Tai Po which we propose to upgraded to Category A comprises -

- (a) upgrading of about 2.8 km of existing stormwater drains by replacing with larger drains of diameter ranging from 300 millimetres (mm) to 1800 mm around Yuen Chau Tsai, Tai Po Market, Yue Kok, Tai Po Old Market, Po Sam Pai and CARE Village in Tai Po; and
- (b) construction of a floodwater pumping station in Tai Po Market and other minor drainage facilities.

----- A site plan showing the locations of the proposed works is at **Enclosure**.

## JUSTIFICATION

8. The drainage catchment of Tai Po covers a large area including the urban areas in Tai Po Market, Tai Po Old Market, Yuen Chau Tsai, areas along Ting Kok Road and the rural areas behind. Most of the existing drains were designed and constructed decades ago to meet the flow requirements and standards at that time. Owing to continuing development and changes in land use over the years, some existing drains have become inadequate to cope with the increasing runoffs and parts of the above areas are susceptible to flooding during severe rainstorms. We have conducted a comprehensive assessment of the capacity of the existing drainage systems for the whole catchment under the Study. The Study has concluded that the drainage systems need improvement at several locations to alleviate flooding risks in the district and to meet the community's increased expectation for better flood protection. In addition, to alleviate the flooding problem in the low-lying area of Tai Po Market during heavy rainstorms, we also propose to construct a floodwater pumping station to pump the surface runoff into Lam Tsuen River.

9. Upon completion of the proposed works, the urban drainage systems in Tai Po will be improved to withstand rainstorms with a return period<sup>1</sup> of one in 50 years.

## FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the proposed works to be about \$87 million at MOD prices, made up as follows -

	<b>\$ million</b>
(a) Upgrading of existing drains	58
(b) Construction of floodwater pumping station and minor drainage facilities	13
(c) Consultants' fees for	8
(i) contract administration	1
(ii) site supervision	7
(d) Environmental mitigation measures	1
(e) Contingencies	7
Total :	87 (in MOD prices)

11. We estimate that the annual recurrent expenditure arising from the proposed works to be about \$600,000.

## PUBLIC CONSULTATION

12. We consulted the Environment, Housing and Works Committee of Tai Po District Council on 23 July 2004 for the urban drainage improvement and river improvement works in Tai Po. Members expressed their support to the proposed works.

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<sup>1</sup> "Return period" is the average number of years during which a certain severity of flooding will occur once, statistically. A longer return period means a rarer chance of occurrence of a more severe flooding.

## ENVIRONMENTAL IMPLICATIONS

13. The part of **109CD** which we now propose to upgrade to Category A is not a designated project under the Environmental Impact Assessment Ordinance. We have completed an Environmental Study for the proposed works which concludes that there would be no insurmountable impacts on the air quality, water, waste management and visual impacts.

14. We estimate that the project will generate about 15 000 cubic metres (m<sup>3</sup>) of construction and demolition (C&D) materials. Of these, we will reuse 9 000 m<sup>3</sup> (60%) on site, deliver 4 500 m<sup>3</sup> (30%) to public filling areas<sup>2</sup> and dispose of 1 500 m<sup>3</sup> (10%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$187,500 for this project (based on a notional unit cost<sup>3</sup> of \$125/m<sup>3</sup>).

## TRAFFIC IMPLICATIONS

15. We have completed a traffic impact assessment for the proposed works to ascertain possible disruption to traffic during construction of the stormwater drains and derive mitigation measures. All existing vehicular entry and exit points, pedestrian routes and pedestrian crossing facilities will be maintained, and temporary traffic arrangements will be designed according to prevailing site constraints and up to the required standards. Existing public transport routes will not be affected by the works. To minimise the traffic impacts caused by construction of the proposed works, we have carefully selected the alignment of the proposed drains so as to avoid the busy areas. The proposed drainage works along Ting Kok Road and in the vicinity of Yuen Chau Tsai will mainly be carried out along existing roadside verge, footpath and cycle tracks. Therefore, traffic impact at most locations of the works is expected to be minimal. To expedite works progress without inducing unacceptable nuisance to the public, we will employ a trenchless method to construct drains at critical locations such as Pak Shing Street near Kwong Fuk Bridge Garden and at CARE Village across the Kowloon-Canton Railway Corporation railway.

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<sup>2</sup> A public filling area is a designated part of a development project that accepts public fill for reclamation purpose. Disposal of public fill in a public filling facility requires a licence issued by the Director of Civil Engineering and Development.

<sup>3</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 per m<sup>3</sup>), nor the cost to provide new landfills (which are likely to be more expensive) when existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

16. During the construction period, we will establish a Traffic Management Liaison Group to discuss, scrutinise and review the proposed temporary traffic arrangements. We will maintain close contacts with the Transport Department, public transport operators, the Hong Kong Police Force and relevant government departments to keep the situation under close surveillance so as to minimise any disruption caused.

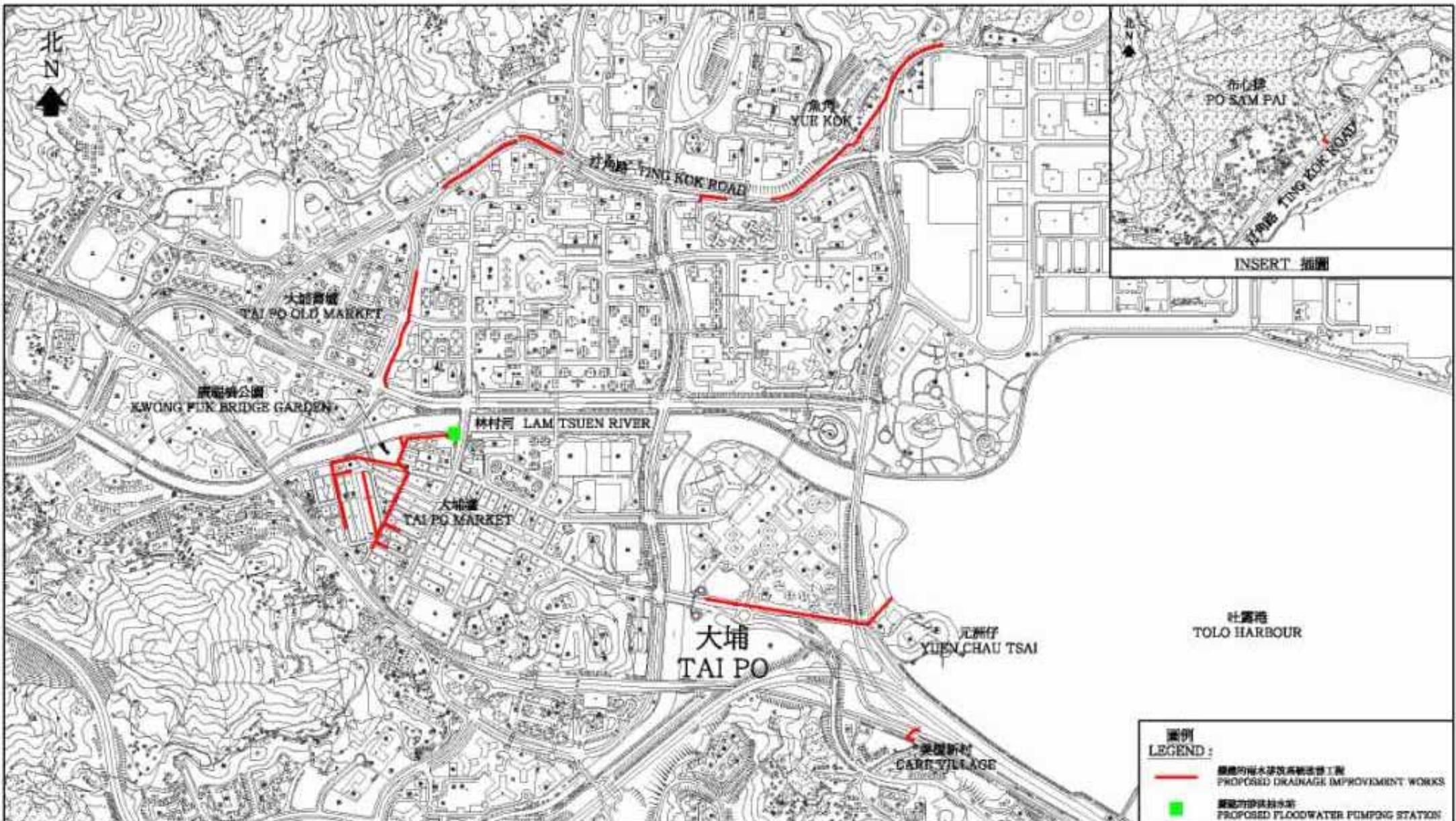
## **JOB CREATION**

17. We estimate that the proposed works will create about 50 jobs (40 for labourers and another ten for professional/technical staff) providing a total employment of 1 350 man-months.

## **WAY FOWARD**

18. We intend to submit our proposal of part-upgrading **109CD** to the Public Works Subcommittee in October/November 2005 with a view to seeking funding approval of the Finance Committee in November/December 2005.

Environment, Transport and Works Bureau  
June 2005



**圖例**  
**LEGEND:**

- 擬議的雨水排放系統改善工程  
PROPOSED DRAINAGE IMPROVEMENT WORKS
- 擬議的防浪抽水站  
PROPOSED FLOODWATER PUMPING STATION

圖號 drawing no.	比例 scale
DCM/2005/010	N.T.S.
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 香港特別行政區政府排水署 DRAINAGE SERVICES DEPARTMENT GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION	

圖名/名稱 drawing title

**大埔市區雨水排放系統改善工程**  
**DRAINAGE IMPROVEMENT WORKS IN TAI PO URBAN AREAS**

繪圖 drawn	ORIGINAL SIGNED	C.W. CHAN	日期 date	15-03-2005
核對 checked	ORIGINAL SIGNED	C.M. CHAN	日期 date	15-03-2005
校核 approved	ORIGINAL SIGNED	W.K. NG	日期 date	15-03-2005
部門 office	顧問工程管理部 CONSULTANTS MANAGEMENT DIVISION			

附件 ENCLOSURE