

**For information**

**Legislative Council Panel on Planning, Lands and Works**

**112CD – Drainage improvement in Northern New Territories - package A**

**PURPOSE**

This paper briefs Members on the Administration’s proposal to upgrade part of **112CD** to Category A at an estimated cost of about \$92 million in money-of-the-day (MOD) prices for upgrading stormwater drains in Sheung Shui and Fanling.

**BACKGROUND**

2. In October 1999, we completed a comprehensive review of the drainage systems in Northern New Territories under **55CD** “Drainage Master Plan study in Northern New Territories”. The drainage master plan study has identified that some of the existing drainage streamcourses and drainage systems are inadequate to meet the required flood protection standards and future development needs.

3. The study recommended a three-package programme (namely Packages A, B and C) of drainage improvement works to tackle the flooding problems in the areas. Package A covers works in San Tin North, Fanling, Sheung Shui and Tai Po North with higher flooding risks whereas Packages B and C cover other parts of Northern New Territories including San Tin South, Kwu Tung and Ma Tso Lung.

4. In September 2000, we upgraded Package A drainage improvement works to Category B as **112CD** “Drainage improvement in Northern New Territories – package A”. In November 2001, we included **118CD** “Drainage improvement in Northern New Territories – package B” and **119CD** “Drainage improvement in Northern New Territories – package C” in Category B.

5. In June 2001, we upgraded part of **112CD** to Category A as **116CD** “Drainage improvement in Northern New Territories – package A – consultants’ fees and investigations” for carrying out site investigation, impact assessments and preliminary design for **112CD**. The consultancy commenced in March 2002.

6. In March 2005, we upgraded part of **112CD** to Category A as **137CD** “Drainage improvement for Ma Wat River at Kau Lung Hang” and commenced the construction in June 2005 for completion in late 2008.

7. We have deployed in-house resources to carry out the detailed design of the drainage improvement works in Sheung Shui and Fanling. We have substantially completed the design and plan to start the proposed works in mid 2006 for completion in mid 2009. We will also deploy in-house resources to supervise the construction works.

## **PROJECT SCOPE AND NATURE**

8. The scope of the proposed works to be part-upgraded under **112CD** comprises the upgrading of about 3.3 kilometers stormwater drains ranging from 225 millimetres (mm) to 2 100 mm in diameter and ancillary works in Shek Wui Hui of Sheung Shui and in the areas around Luen Wo Hui of Fanling. A site plan showing the locations of the proposed works is at **Enclosure**.

## **JUSTIFICATION**

9. The Sheung Shui and Fanling areas comprise new residential and commercial developments, numerous community facilities and original settlements such as Shek Wu Hui, a major traditional market. Past flooding and complaint records show that parts of the existing drainage systems are inadequate to abate flooding, causing nuisance to the public and disruption to traffic. In particular, the old development areas such as Ling Shan, Fan Gardens and Shek Wu Hui are flood prone areas during heavy rainstorms. The existing drainage systems in these areas were already in place decades ago and were only designed to meet the flow requirements and standard at that time. There have not been any major improvements.

10. Apart from the old development areas, the drainage master plan study has revealed that the drainage systems in some of the local areas in Sheung Shui and Fanling are of inadequate capacity to cater for the rapid development in the last decade. We therefore propose to construct stormwater drains in such areas to bring the drainage systems up to the latest flood protection standards.

11. Upon completion of the proposed drainage improvement works, the drainage systems will have a flood protection standard of a 50-year return period<sup>1</sup> rainstorm for branch drains and a 200-year return period rainstorm for trunk drains.

## FINANCIAL IMPLICATIONS

12. We estimate the capital cost of the proposed works under **112CD** to be about \$92 million in MOD prices, made up as follows –

	<b>\$ million</b>
(a) Drainage improvement works	82
(b) Environmental mitigation measures	2
(c) Contingencies	8
Total	<u>92</u> (in MOD prices)

13. We estimate the annual recurrent expenditure arising from this project to be about \$94,000.

## PUBLIC CONSULTATION

14. We consulted the North District Council, Sheung Shui District Rural Committee, Fanling District Rural Committee and representatives of North District local business associations on the proposed drainage works on 18 and 29 July, 10 August and 15 September 2005 respectively on the proposed drainage works. All supported the implementation of the proposed works.

## ENVIRONMENTAL IMPLICATIONS

15. The proposed works to be part-upgraded under **112CD** is not a designated project under the Environmental Impact Assessment Ordinance. We completed an Environmental Study (ES) for the proposed works in 2003. The ES concluded that with full implementation of the recommended mitigation measures and environmental monitoring and audit programme, the works would not have significant residual environmental impacts. We would incorporate the

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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.

ES recommendations into the works contract for implementation. During construction, we will control noise, dust and site run-offs through implementation of mitigation measures such as use of temporary noise barriers and silenced construction plant to reduce noise generation, water-spraying to reduce emission of dust, discharging water from excavation through silt traps.

16. We will 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 construction and demolition (C&D) materials. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control 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. We will encourage the contractors to use steel instead of timber in formwork and temporary works to reduce the generation of waste. We will require the contractor to implement necessary measures to minimise the generation of C&D materials and to reuse C&D materials as fill material as far as possible.

17. We estimate that the project will generate about 49 000 tonnes of C&D materials. Of these, we will reuse about 19 000 tonnes (39%) on site, deliver 28 000 tonnes (57%) to public fill reception facilities<sup>2</sup> for subsequent reuse. In addition, we will dispose of 2 000 tonnes (4%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be about \$1 million for this project (based on an unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne<sup>3</sup> at landfills).

## **JOB CREATION**

18. We estimate that the proposed works will create about 52 jobs (45 for labourers and another seven for professional/technical staff) providing a total employment of 1 550 man-months.

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<sup>2</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>3</sup> The 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 are likely to be more expensive) when the existing ones are filled.

## **WAY FORWARD**

19. Members are invited to support our proposal of part-upgrading of **112CD** for consideration by the Public Works Subcommittee in January 2006 with a view to seeking funding approval of the Finance Committee in February 2006.

**Environment, Transport and Works Bureau  
December 2005**

