For discussion
on 24 October 2005

Legislative Council
Panel on Environmental Affairs

4340DS "Port Shelter sewerage stage 3 –
Sai Kung Area 4 and Mang Kung Uk sewerage"

PURPOSE

This paper seeks Members' support for the Administration's proposal to upgrade part of the project **4340DS** "Port Shelter sewerage stage 3 – Sai Kung Area 4 and Mang Kung Uk sewerage" to Category A at an estimated cost of $73.0 million in money-of-the-day (MOD) prices to provide the trunk sewerage for Sai Kung Area 4, prior to submission to the Public Works Subcommittee for consideration with a view to seeking the Finance Committee's funding approval.

PROPOSAL AND JUSTIFICATION

2. Sai Kung Area 4 covers 37 hectares located on the northern side of Sai Kung town centre. At the moment there are only a few developments there, including a school, an electricity substation, a police station, a community centre, car parks and public leisure facilities. The 50 cubic metres (m^3) of sewage per day that is generated by these developments is conveyed by the existing sewerage to the Sai Kung sewage treatment works.

3. Sai Kung Area 4 is planned to be further developed for residential, commercial, cultural, recreational and tourism-related uses (including a hotel). The projected population upon full development by year 2016 will be about 6 800 people, who will produce an estimated 3 750 m^3/day of sewage. The existing sewerage now handling 8 000 m^3/day is approaching its design capacity and does not have sufficient capacity to handle the additional sewage arising from the planned developments. We therefore propose to construct a separate trunk sewerage system with a capacity of 7 500 m^3/day to serve all the developments in Sai Kung Area 4 and to cater for the planned future expansion of the sewerage network to serve the environs upto Tai Mong Tsai.

4. The scope of the part of the sewerage works under **4340DS** that we propose to upgrade to Category A comprises –

a) construction of a sewage pumping station at Sai Kung Area 4;

b) construction of about 2 200 metres (m) twin rising mains; and

c) construction of about 700 m of sewers and ancillary works.

A site plan showing the proposed works is at **Enclosure 1**.

5. We plan to commence construction in early 2006 for completion in late 2008.

FINANCIAL IMPLICATIONS

6. We estimate the cost[1] of the proposed works to be $73.0 million in MOD prices and the annual recurrent cost[1] to be about $2.5 million. Based on the current level of expenditure on operation and maintenance of sewerage facilities, the proposed works by themselves will lead to an increase in the recurrent cost of providing sewage services by about 0.15%, which will need to be taken into account in determining sewage charges.

7. We estimate that the proposed works will create about 50 jobs[1] (43 for labourers and another seven for professional/technical staff) providing a total employment of 1 200 man-months.

PUBLIC CONSULTATION

8. We presented the proposals for the implementation of Port Shelter sewerage stage 3 works to the then Sai Kung District Board in August 2001 and to the Sai Kung Rural Committee in September 2001. Both the then Sai Kung District Board and the Sai Kung Rural Committee supported the implementation of the project.

9. We gazetted the proposed works under the Water Pollution Control (Sewerage) Regulation in October 2001 and received no objection. The Director of Environmental Protection authorized the proposed works in January 2002.

10. We consulted the Sai Kung District Council on the proposed works on 6 June 2005. The Sai Kung District Council supported the implementation of the proposed works.

[1] These are the latest estimates. We would finalize the project costs and estimated new job opportunities, and include the cost breakdown prior to submitting the proposals to the PWSC for consideration.

ENVIRONMENTAL IMPLICATIONS

11. The proposed project is a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project requires an environmental permit (EP) under the Ordinance for construction and operation. The Director of Environmental Protection granted the EP to construct and operate the proposed works on 27 June 2002. We will install a forced ventilation system fitted with de-odourizer in the proposed pumping station to combat the potential odour problem. During construction, we will control noise, dust and site run-off within established standards and guidelines through implementation of mitigation measures, such as the use of temporary noise barriers and quieter construction equipment, and water-spraying, to reduce noise and dust respectively. We will also carry out regular site inspections to ensure that these recommended mitigation measures and good site practices are properly implemented.

12. We have given due consideration to the need to minimize construction and demolition (C&D) materials in the planning and design stages of the proposed works. 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 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 designated public filling 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.

13. We estimate that the proposed works will generate about 23 900 cubic metres (m^3) of C&D materials. Of these, we will reuse about 9 800 m^3 (41.0%) on site and 14 000 m^3 (58.6%) as fill in public filling areas[2], and dispose of 100 m^3 (0.4%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be $12,500 for this project (based on a notional unit cost[3] of $125/$m^3$).

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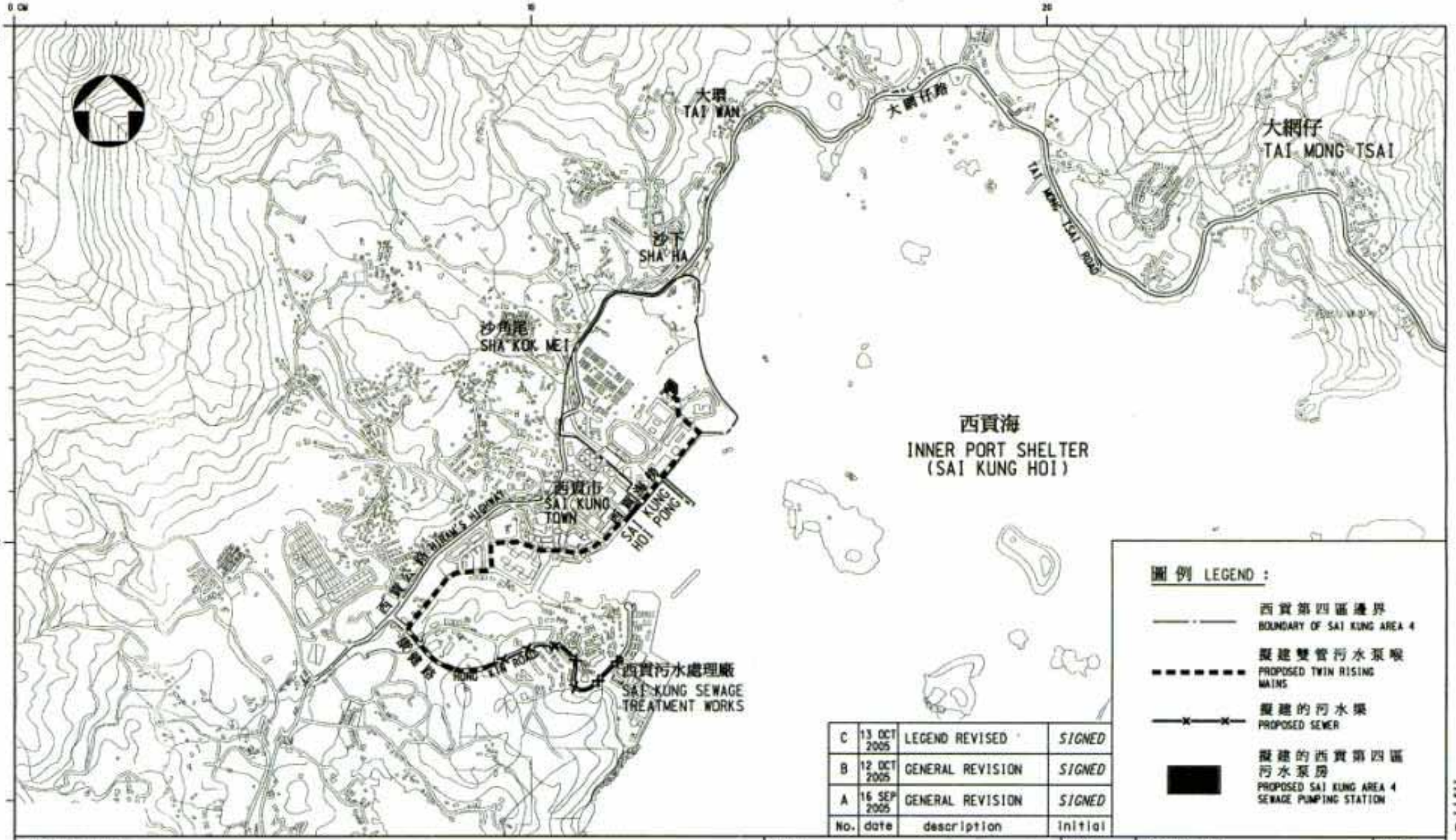
[2] A public filling area is a designated part of a development project that accepts public fill for reclamation purposes. Disposal of public fill in a public filling area requires a licence issued by the Director of Civil Engineering and Development.

[3] 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^3$), nor the cost of providing 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.

ADVICE SOUGHT

14. Members are invited to support our proposal to upgrade part of **4340DS** to Category A for consideration by the Public Works Subcommittee in November 2005 with a view to seeking the funding approval of Finance Committee in December 2005.

Environment, Transport and Works Bureau
October 2005



圖例 LEGEND :

- 西貢第四區邊界 BOUNDARY OF SAI KUNG AREA 4
- 擬建雙管污水泵喉 PROPOSED TWIN RISING MAINS
- 擬建的污水渠 PROPOSED SEWER
- 擬建的西貢第四區污水泵房 PROPOSED SAI KUNG AREA 4 SEWAGE PUMPING STATION

No.	date	description	initial
C	13 OCT 2005	LEGEND REVISED	SIGNED
B	12 OCT 2005	GENERAL REVISION	SIGNED
A	16 SEP 2005	GENERAL REVISION	SIGNED

drawing title

牛尾海污水收集系統第三階段
西貢第4區污水收集系統

PORT SHELTER SEWERAGE STAGE 3
— SAI KUNG AREA 4 SEWERAGE

drawn	SIGNED	Y. W. YIP	date 26.08.05
checked	SIGNED	S.C. CHIU	date 28.08.05
approved	SIGNED	T. Y. YUEN	date 12.10.05
office	SEWERAGE PROJECTS DIVISION		

drawing no. DDN/340DS/0005C

scale 1:20 000

DRAINAGE SERVICES DEPARTMENT
GOVERNMENT OF THE
HONG KONG
SPECIAL ADMINISTRATIVE REGION

附件1 ENCLOSURE 1