

致：環境運輸及工務局：

淨化海港計劃

第二期諮詢

回應文件

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「淨化海港計劃」

第二期包括哪些項目？

我們必須投資興建「淨化海港計劃」下一期的設施，才能保障維港水質。我們已完成多個詳盡的研究和測試，擬定第二期計劃的需要。根據研究結果，第二期計劃應包括：

- 擴建深層污水隧道網絡，以收集和輸送港島其餘地區的污水作適當處理；
- 提高現時化學處理污水的能力，由目前的170萬立方米負荷量提升至每日280萬立方米；
- 為「淨化海港計劃」處理的所有廢水進行消毒，方行排入海港；及
- 提高處理程度，為「淨化海港計劃」所有污水進行生物處理。

為什麼我們需要興建深層隧道呢？

由於維港兩岸的高密度發展，為網絡及維修大型污水幹渠而必須進行的道路挖掘工程會嚴重影響附近路面交通。為了避免對交通及其他各種如電纜、輸氣管道、供水網絡、樓宇地基以及地下鐵路等地下設施造成影響，我們需要興建深層污水隧道（深度達至海拔以下76至150米），將污水輸往污水處理廠進行集中處理。利用深層隧道輸送污水這個概念，於2000年為檢討海港污水處理方案時由本地及國際專家所確認。

造價和每年開支太高，暫時不同意。

為何需要消毒？

雖然海港的整體含菌量（大腸桿菌）下降了約50%，但維港西部及荃灣一帶的泳灘卻由於受到從昂船洲排出大量經處理而沒有消毒的廢水所影響，含菌量不跌反升，如要糾正此情況，便需要為經處理的廢水進行消毒，才排放入海港。



同意，但造價和每年經常費用應可下調30%。

HATS Stage 2

What is needed?

We must invest in the next stage of HATS to make our harbour healthy. We have undertaken a comprehensive series of studies and trials to guide us towards the best way forward. These have demonstrated that Stage 2 should include:

- extension of the deep tunnel network to collect and convey sewage from the remaining parts of Hong Kong Island for proper treatment;
- expansion of the existing chemical treatment capacity from the present design level of 1.7 million cubic metres daily to 2.8 million cubic metres;
- provision of disinfection to all HATS treated flows before discharge into the harbour; and
- upgrading to biological treatment for all HATS flows.

Why do we need to construct deep tunnels?

Because of the high density of developments on both sides of the harbour, excavation of roads for the installation and maintenance of sewers will lead to severe traffic disruption. To avoid traffic impacts as well as the many underground facilities such as electricity supply and communication cables, gas pipelines, water supply network, building foundations and the Mass Transit Railway, we have to build deep tunnels (at depths between 76 m and 150 m below sea level) to transfer our sewage to the sewage treatment works for centralized treatment. The deep tunnel concept was reviewed and endorsed by a panel of local and international experts in 2000.

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Why Disinfection?

Whilst the overall bacteria (*E.coli*) levels in the harbour have been reduced by some 50%, the levels in the western harbour and the beaches along the Tsuen Wan coast have increased as a result of the impacts due to the discharge of the large volume of treated effluent (without disinfection) off Stonecutters Island. Disinfection of the treated flows is necessary to improve the situation.



只 100 萬 0 亦 4

首選方案 (方案甲)

Our Preferred Option: Option A

關於「淨化海港計劃」第二期的收集、處理和排放污水有多個方案，我們已進行了多項研究和測試，探討四個先前由本地及國際專家建議的方案，這些方案將收集到的污水作不同程度的分散處理。研究結果顯示，雖然四個方案各有利弊，但全部都可以達到保護維港水質的目標。

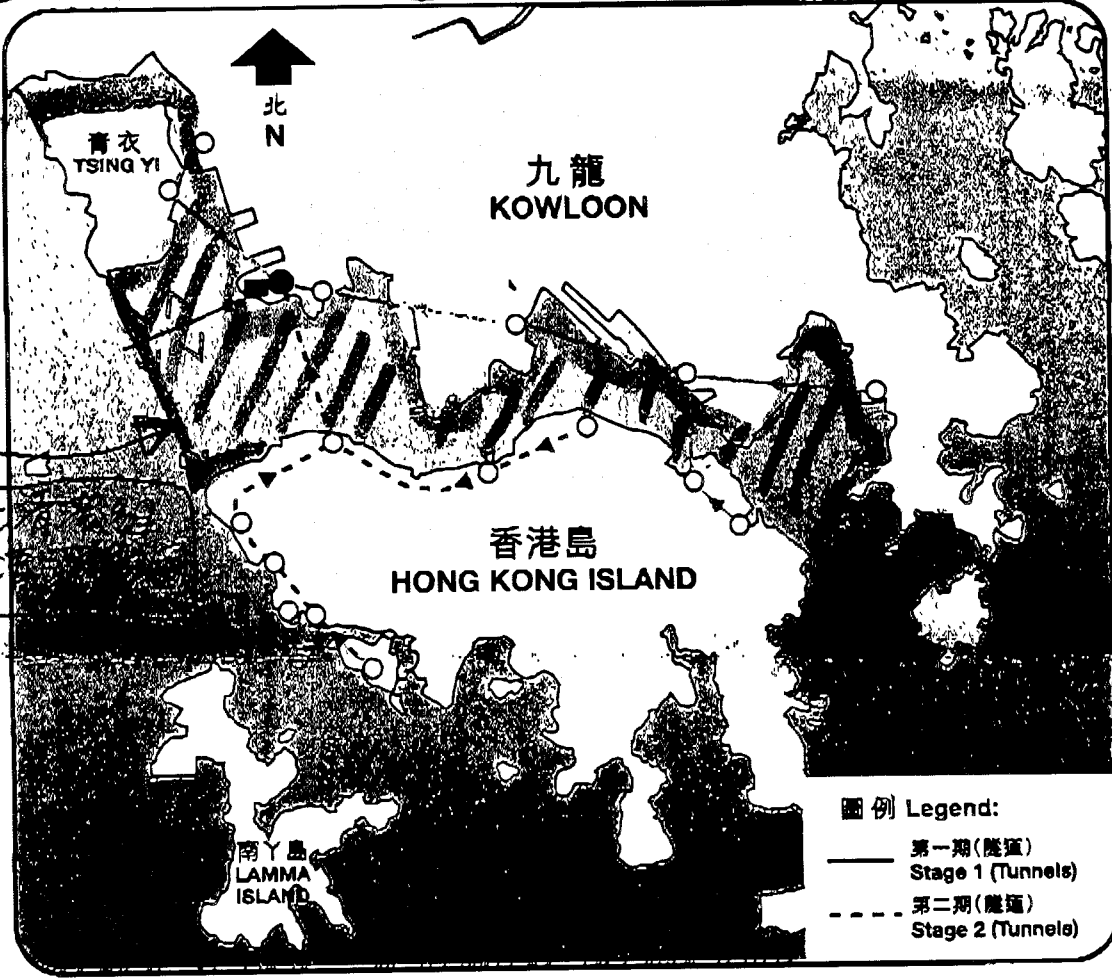
There are many different possible configurations for the collection, treatment and disposal of sewage for HATS Stage 2. We have carried out a series of studies and trials to examine the feasibility of four options proposed earlier by a panel of local and international experts. These options involve varying degrees of decentralization. The findings show that all four options can achieve the ultimate goal of providing proper protection for our harbour, although they have different strengths and weaknesses.

考慮過各方案的利弊後，我們認為計劃第二期較可取的方案，是擴建及改善昂船洲污水處理廠的現有設施，為來自維港兩岸所有污水提供中央化學處理；並在毗鄰的土地上，興建新的生物污水處理設施，以便最終可以有力量去除污水中的營養物。處理後的廢水經過消毒後，會經由昂船洲的排放口排入海港。

Taking into consideration all these strengths and weaknesses, our preferred option for HATS Stage 2 is to expand and upgrade the existing sewage treatment works at Stonecutters Island to provide centralized chemical treatment for sewage from the whole HATS catchment, and

政府似乎只關心海港的水質，而忽略
海港海面其實是有很多垃圾和漂
浮物，我建議政府利用綜措人士力
資源(60歲以下健康者)成立海港清潔組
為納稅人做些實事

「淨化海港計劃」第二期首選方案
The Preferred Option for HATS Stage 2



海港
每天



建造費用

以首選方案分兩階段落實「淨化海港計劃」第二期所涉及的建造費用估計為195億元，當中第二期甲佔84億元，第二期乙佔111億元，這些估計包括各項污水處理和消毒設施、污水隧道、污水泵房以及其他改善工程的建造成本。

	總設費用 (港幣億元)	經常性費用總額 (港幣億元/年)
第二期甲	84	4.4
第二期乙	111	7.2
總額	195	11.6

經常性費用

「淨化海港計劃」的經常性費用將由每年3.2億元(按最大設計流量計)逐步遞增至第二期甲落成及全面運作時的每年7.6億元。當第二期乙啟用後及全面運作時，估計費用將進一步提高至每年14.8億元。

我們的研究顯示，與一步到位的建造成本比較，分階段進行工程的安排會令第二期工程的總造價略為提高約4億元；但將生物處理設施的工程分階段進行，到有實際需要時才落實啟用，每年所節省的經常性開支，卻可達到7億元以上。



Capital Cost

The total capital cost of implementing Option A in two phases is estimated to be \$19.5 billion, with Stage 2A costing \$8.4 billion and Stage 2B costing \$11.1 billion. These estimates include the costs of treatment and disinfection facilities, tunnels, pumping stations and other upgrades.

	Capital Cost (HK\$ billion)	Recurrent Cost (HK\$ billion per year)
Stage 2A	8.4	0.44
Stage 2B	11.1	0.72
Total	19.5	1.16

Recurrent Cost

The recurrent cost of HATS will increase from \$0.32 billion to \$0.76 billion per year once Stage 2A is operating at full capacity. It is estimated to increase further to \$1.48 billion per year when Stage 2B comes into full operation.

Our studies have shown that the phased approach will increase the capital cost of HATS Stage 2 by a marginal amount of \$0.4 billion when compared with the "no phasing approach". However, the projected saving in the recurrent cost from optimizing the timing for the introduction of biological treatment can amount to more than \$6.7 billion per year.

先做第二期甲，政府財赤變回盈餘才考慮做第二期乙，但我嫌建設費用84億元和每年經常性費用4.4億元費用太高，應該有下調30%的空間。



你可以如何參與

你的支持和意見，對於使維多利亞港的水質能回復至一個亞洲國際都會應有的水平，至為重要。

政府現就「淨化海港計劃」第二期工程提出的建議如下：

- 在第二期甲工程，擴展深層污水隧道，以便將港島餘下各區的污水收集並輸往昂船洲污水處理廠集中處理；
- 在第二期甲工程，擴充昂船洲污水處理廠現有的化學處理設施，以及增設污水消毒設施；
- 為配合第二期乙工程中要興建的生物處理設施，在昂船洲污水處理廠附近預留土地；
- 就第二期乙工程展開初步地質勘測及環境影響評估；及
- 監察水質及污水量，密切注視維港兩岸的人口發展，以確保在有需要時，能適時開展第二期乙工程。

這項規模龐大的污水工程基建項目將會為我們及我們的下一代帶來莫大裨益。我們希望市民了解就「淨化海港計劃」提出的各項建議，並聽取閣下的意見。我們更需要瞭解閣下對以下問題的意見：

你是否同意將提出的首選方案，即集中在昂船洲處理污水？

你是否贊成分兩個階段進行第二期計劃的工程，即第二期甲及第二期乙工程？

你是否同意有必要保護維多利亞港的水質，即使這需要支付較高的排污費用也認為物有所值呢？

既然完成第二期甲工程，為所有污水進行化學處理和消毒，已經令海港水質符合大部份水質標準，納稅人未必接受再花11億元和每年7.2億元的第二期乙生物處理污水，因為造價太貴和經常費用開支太高而物非所值，所以進行第二期乙工程前要先三思而後行。

How You Can Help

Your support and contribution is essential in order to return the water quality of Victoria Harbour to a standard commensurate with Hong Kong's status as Asia's World City.

The Government's recommendations for Stage 2 of HATS includes:

- extension of deep tunnels to collect sewage from the remaining parts of Hong Kong Island and transfer it to Stonecutters Island Sewage Treatment Works for centralized treatment under HATS Stage 2A;
- expansion of the existing chemical treatment facilities at Stonecutters Island Sewage Treatment Works, plus the addition of disinfection facilities, under HATS Stage 2A;
- reservation of land near the Stonecutters Island Sewage Treatment Works for a biological treatment plant to be built as part of HATS Stage 2B;
- early commencement of preliminary site investigations and environmental impact assessments for HATS Stage 2B; and
- monitoring of harbour water quality and sewage flow trends, as well as population build-up in the harbour area to ensure the timely commissioning of HATS Stage 2B when needed.

This is a major sewerage infrastructure undertaking that will bring benefits to us and our future generations. We want to be sure that you understand the proposals for HATS and would like to hear your opinions and suggestions. We are particularly keen to hear your views on the following questions:

- Do you agree with the preferred option, i.e. Option A - centralized treatment at Stonecutters Island?
- Do you agree that Stage 2 should be implemented in two phases, i.e. HATS Stage 2A and Stage 2B?
- Do you agree that protecting the water quality of Victoria Harbour is essential and that it is worth you paying higher sewage charges in line with the "Polluter Pays Principle"?