

**LegCo Panel on Environmental Affairs and  
LegCo Panel on Planning, Lands and Works**

**Strategic Sewage Disposal Scheme Stage I  
Progress of Tunnelling Work**

**Introduction**

Members were briefed on the status of the completion work for the six sewage collection tunnels under the Strategic Sewage Disposal Scheme (SSDS) Stage I during the joint meeting of the Panels held on 5 February 1999 (hereinafter referred to as "the last briefing"). This paper provides updated information on the current situation and the latest progress with the work. In summary, during the eighteen months that the first contractor was on the job, 7.3% of the tunnel excavation was completed. In the eighteen months after the works were re-entered by Government and re-tendered, another 12.7% of the works were completed. In the two and a half months between 5 February and 18 April, 13% of the works were completed, bringing the total to 33%.

**Background**

2. There are altogether seven deep tunnels which have a total length of 25.3 km in the SSDS Stage I. The interim outfall tunnel, which is 1.7 km in length and 5 m in diameter, has already been completed at a depth of about 100 m below the harbour. The other six sewage collection tunnels comprise two western tunnels from Kwai Chung to Tsing Yi and Tsing Yi to Stonecutters Island and four eastern tunnels from Tseung Kwan O and Chai Wan to Kwun Tong, Kwun Tong to To Kwa Wan and To Kwa Wan to Stonecutters Island. The depths of these tunnels are up to 150 m below ground surface. Their approximate alignments are shown in the plan at Enclosure 1.

3. Works for the six tunnels were originally included in two contracts and scheduled for completion in mid 1997. In mid 1996, the original tunnel contractor responsible for both contracts unilaterally suspended works in all six tunnels, claiming impossibility in complying with the contract specification. This finally led to the forfeiture of the two contracts in December 1996. The tunnel completion works are being carried out in three separate contracts with two tunnels per contract. The contract for completing the western tunnels was awarded in July 1997. The other two contracts for completing the eastern tunnels were awarded in January 1998.

**Progress of Tunnelling Work**

4. At the last briefing, Members were informed that excavation for the six tunnels was about 20% completed. Since then and up to 18 April 1999, another 3 km of tunnels have been excavated, bringing the total to 33%. The total length of tunnels which has been excavated is about 7.8 km; and 15.8 km of tunnels remains to be excavated. A summary progress chart showing the weekly cumulative percentage completion of the six tunnels from the beginning of the first completion contract (i.e. July 1997) is attached at Enclosure 2. For illustration purpose, Enclosure 3 compares the weekly progress of the current tunnel completion works with that achieved by the previous contractor. It is apparent that much better progress is being made in the completion contracts.

5. Progress on each tunnel (updated to 18 April 1999) is described in more detail in

the following paragraphs.

### **Western Tunnels**

6. Excavation for the tunnel from Kwai Chung to Tsing Yi (Tunnel G) using drill and blast method was completed in end January 1999. The contractor is now working to complete the permanent lining work for this tunnel.

7. For the tunnel from Tsing Yi to Stonecutters Island (Tunnel F), the tunnel boring machine (TBM) has passed through the band of weak rock in late February 1999 and the progress of work has since improved substantially. Excavation for this tunnel is about 42% completed (compared to about 25% completion reported during the last briefing).

### **Eastern Tunnels**

8. For the tunnel from Chai Wan to Kwun Tong (Tunnel AB), TBM excavation has commenced in mid February 1999. The contractor is going through the initial learning curve of using the TBM and we expect that the excavation progress will pick up steadily. Excavation for this tunnel is about 19% completed.

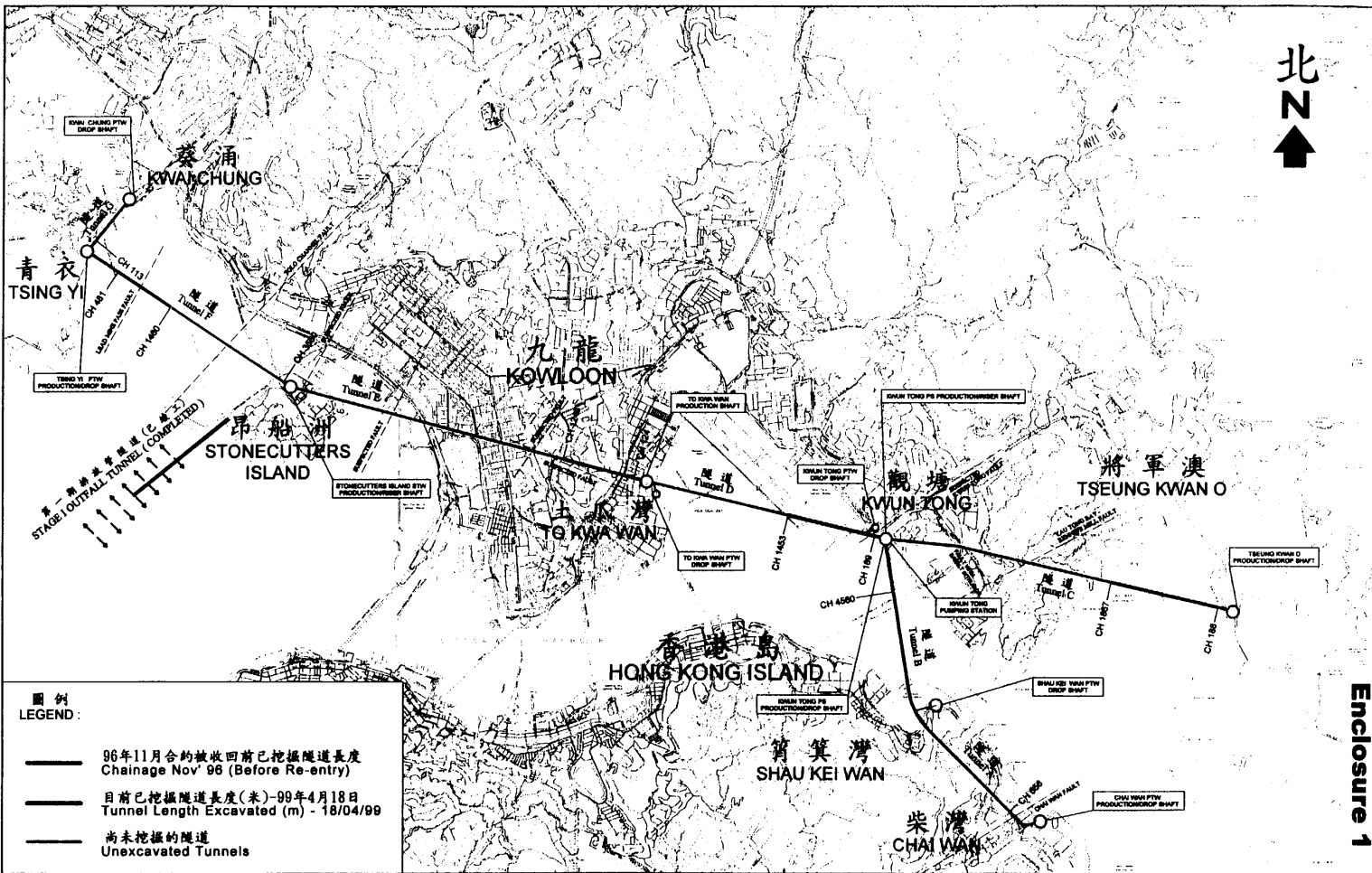
9. Excavation in the tunnel from Tseung Kwan O to Kwun Tong (Tunnel C) is progressing well. Excavation for this tunnel is about 35% completed (compared to about 17% completion reported during the last briefing).

10. Excavation in the tunnels from Kwun Tong to To Kwa Wan (Tunnel D) and from To Kwa Wan to Stonecutters Island (Tunnel E) has gone through the initial learning curve and the progress rate has picked up. Excavation for the two tunnels is about 41% and 23% completed respectively (compared to about 21% and 10% completion reported during the last meeting).

### **Looking Ahead**

11. The various technical problems that have been encountered since commencement of the 3 completion contracts have been resolved satisfactorily. The progress of work towards completing the tunnels has improved substantially in the past three months. Whilst in a project of this nature and magnitude there may be further technical problems to be encountered in completing the remaining work, there is a growing level of assurance that these problems can be resolved. It remains the expectation that all tunnels under SSDS Stage I will be completed in the year 2000.

Planning, Environment & Lands Bureau and  
Works Bureau  
April 1999



Enclosure 1

圖例  
LEGEND:

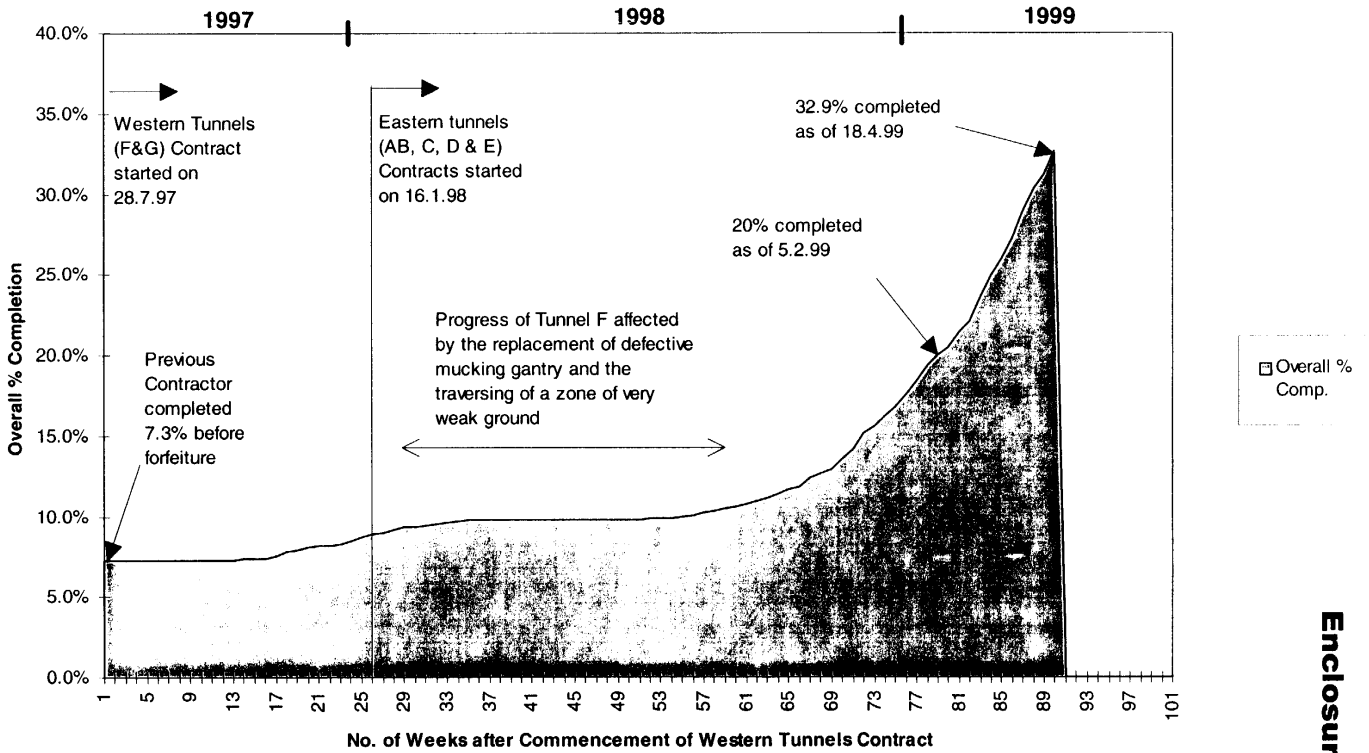
- 86年11月合約被收回前已挖掘隧道長度  
Chainage Nov '96 (Before Re-entry)
- - - 目前已挖掘隧道長度(米)-99年4月18日  
Tunnel Length Excavated (m) - 18/04/99
- ..... 尚未挖掘的隧道  
Unexcavated Tunnels

合約編號  
CONTRACT NO. DC/93/18, DC/96/17, DC/96/18 & DC/96/20  
策略性污水排放計劃第一期 - 污水隧道系統  
STRATEGIC SEWAGE DISPOSAL SCHEME STAGE I - SEWAGE TUNNEL SYSTEM

日期 20.04.99 圖號 HQ/99/004

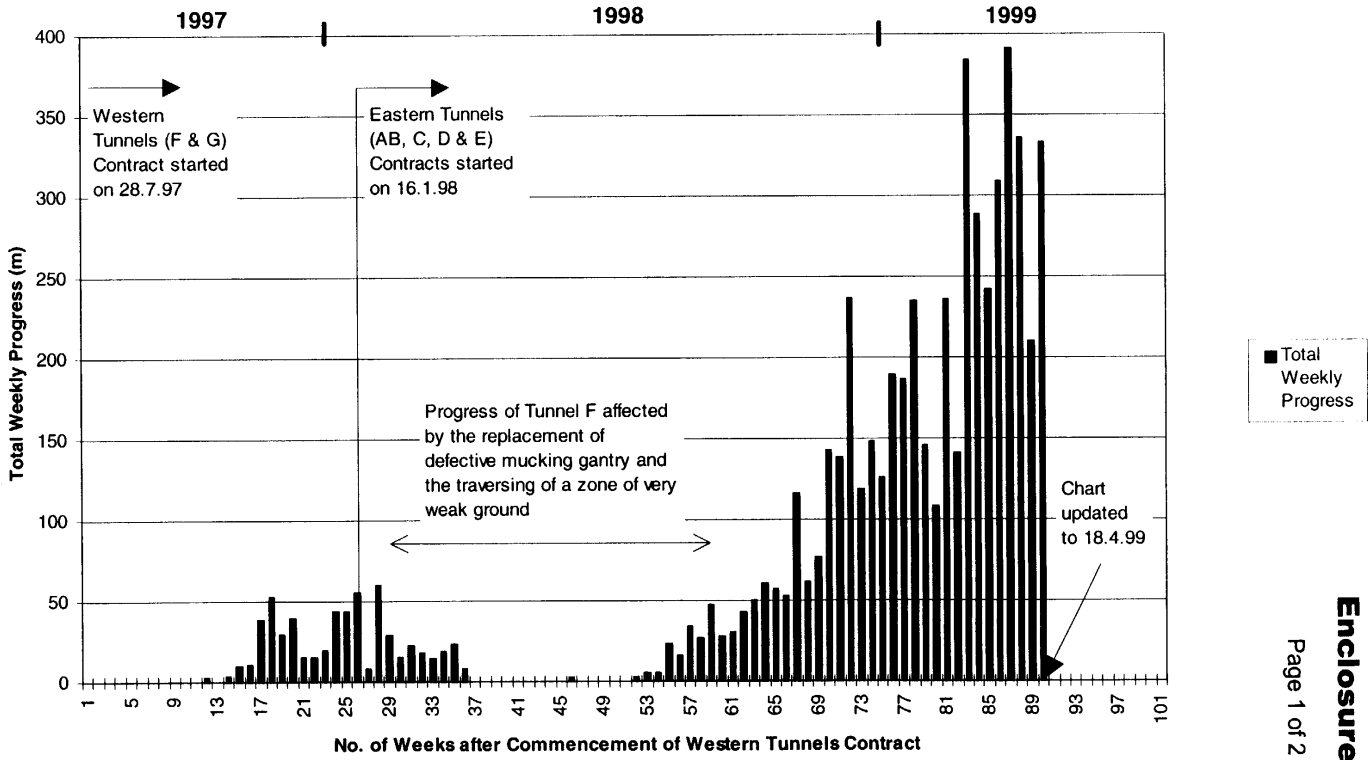


## Completion Contractors' Tunnel Excavation Progress - Overall % Completion



**Enclosure 2**

### Completion Contractors - Weekly Progress of All Tunnels



## Previous Contractor - Weekly Progress of All Tunnels

