

# KWAI CHUNG SEWAGE SCREENING PLANT

The Kwai Chung Sewage Screening Plant is designed to provide preliminary treatment to domestic and industrial sewage generated from Tsuen Wan and Kwai Chung districts. The completion of this vast capacity screening plant at a cost of HK\$139 million represents a major step forward in the Government's plans to reduce pollution in Rambler Channel.



## 葵涌污水隔篩廠

葵涌污水隔篩廠是專為荃灣及葵涌地區的住宅及工業污水提供初級處理。這龐大容量的污水隔篩廠的建造成本是港幣1.39億元。其落成使用，顯示政府就減低藍巴勒海峽污染的計劃，已向前邁進了一大步。



渠務署

Drainage Services Department

CLEAN HARBOUR AND BETTER ENVIRONMENT



The Kwai Chung Sewage Screening Plant is a multi-storey treatment plant which was designed and supervised by staff of the Drainage Services Department. The objectives of the plant are to provide (i) preliminary treatment to domestic and industrial sewage generated from Tsuen Wan and Kwai Chung districts and (ii) the required hydraulic head to discharge the treated sewage effectively through a submarine outfall.

The plant can provide preliminary treatment to a maximum capacity of 870,000m<sup>3</sup> of sewage per day generated from domestic and industrial sources, which is equivalent to the quantity of sewage produced by a population of 1.1 million. About 2,680 kg/day of biochemical oxygen demand and 3,710 kg/day of suspended solids are removed from the sewage before it is discharged to the Rambler Channel.

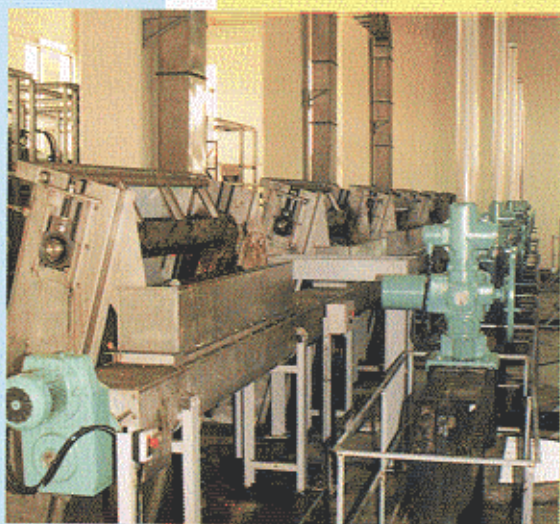
After sewage is conveyed to the plant, it will pass through a series of treatment devices. The major elements of the plant include:-

- 2 mechanically raked screens to remove large objects with size larger than 150mm,
- 6 screw pumps to provide the necessary hydraulic head for the treatment processes and subsequent discharge through the submarine outfall,
- 6 coarse screens to screen out gross solids with size larger than 25mm,
- 4 aerated grit channels to settle grit particles with size larger than 0.2mm,
- 4 fine screens to screen out gross solids with size larger than 6mm,
- 4 screw compactors and 4 screw grit classifiers to dewater the screenings and grits and then dispose of to landfill.

The treated sewage will be discharged into the Rambler Channel through a submarine outfall for further dispersion and dilution. After completion of the Strategic Sewage Disposal Scheme Stage I in mid-1997, the treated sewage will be conveyed to a deep sewer tunnel leading to the sewage treatment works on Stonecutters Island. Consequently, the water quality at Rambler Channel will be greatly improved.

# KWAI CHUNG SEWAGE

## 葵涌污水



Coarse Screens 粗隔篩



Aerated Grit Channels





# SCREENING PLANT

## 隔篩廠



曝氣沉砂槽



Fine Screens 幼隔篩

boundary and Discharge Scheme

集區及排放計劃

葵涌污水隔篩廠是一座多層的污水處理廠，由渠務署人員設計及監督建造。建造隔篩廠的目的是(i)為荃灣及葵涌地區住宅及工業污水提供初級處理及(ii)提供所需的水位高度以便透過海底排放管有效地排放經處理的污水。

隔篩廠每天可以為住宅及工業污水提供初級處理，其最高處理量為每年870,000立方米，相等於由110萬人口所產生的污水量。該廠在污水排放入藍巴勒海峽前，每天可從污水內清除2,680公斤的生化需氧量和3,710公斤的懸浮個體。

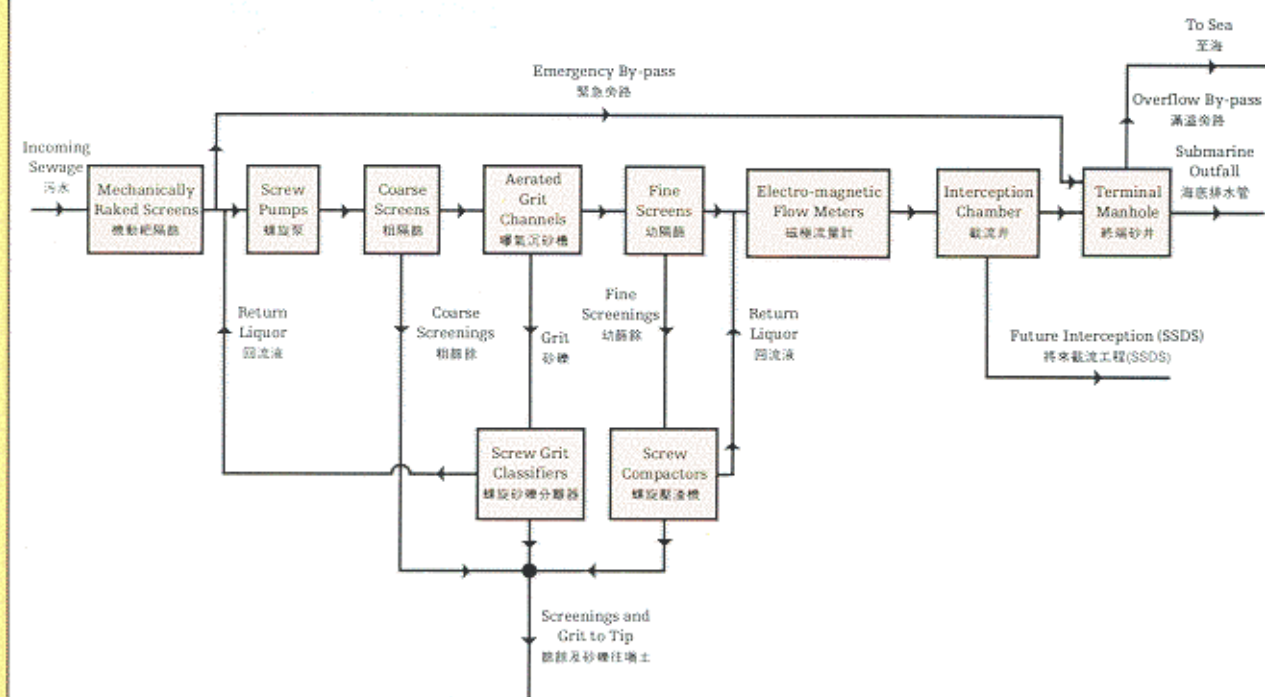
污水經輸送至廠房之後，將會經過一系列的處理設施。廠房的主要部分包括：

- 2個機動耙隔篩，將大於150毫米的大型物體分隔開，
- 6個螺旋泵為污水處理過程及透過海底排放管排放污水，提供所需的水位高度，
- 6個粗隔篩用來篩去大於25毫米的顯著固體，
- 4個曝氣沉砂槽用以沉澱大於0.2毫米的砂礫粒，
- 4個幼隔篩用以篩去大於6毫米的顯著固體，
- 4個螺旋壓渣機及4個螺旋砂礫分離器用以將隔篩物和砂礫脫水，以便運往堆填區處置。

經處理的污水將會透過海底排放管，排放入藍巴勒海峽，以作進一步的散布和稀釋。策略性污水排放計劃第一階段於一九九七年中完成之後，經處理污水將會經深入地底污水隧道輸送至昂船洲污水處理廠。藍巴勒海峽的水質會因此而大為改善。

Sewage Treatment Flow Diagram

污水處理流程圖





The construction of the plant was started in December 1991 and completed in February 1995. Two contractors were employed over a 3½ year period to carry out the civil, mechanical and electrical works. The total construction cost is HK\$ 139 million.

The following parties were instrumental in bringing the project to a successful conclusion :

隔篩廠於一九九一年十二月動工建造，並於一九九五年二月完成。在三年半的施工期內，當局聘用了兩個承建商，進行土木及機電工程。總建造費用為港幣1.39億元。

工程計劃圓滿成功，下列各參與機構均有不少貢獻：

### Project Controller

### 工程管理

Territory Development Department,  
Government of the Hong Kong  
Special Administrative Region

香港特別行政區政府  
拓展署

### Project Design and Contract Management

### 工程設計及合約管理

Drainage Services Department,  
Government of the Hong Kong  
Special Administrative Region

香港特別行政區政府  
渠務署

Civil Works      Sewerage  
Project Division

土木工程   污水工程部

E & M Works    Electrical and  
Mechanical Projects  
Division

機電工程   機電工程部

### Contractors

### 承建商

Civil Works      China Road & Bridge  
Corporation

土木工程   中國公路及橋樑建設總公司

E & M Works    Chevalier  
(Envirotech) Ltd.

機電工程   其士（環境技術）有限公司

### Operation and Maintenance

### 操作及保養

Sewage Treatment Division 2,  
Drainage Services Department,  
Government of the Hong Kong  
Special Administrative Region

香港特別行政區政府  
渠務署  
污水處理部（二）