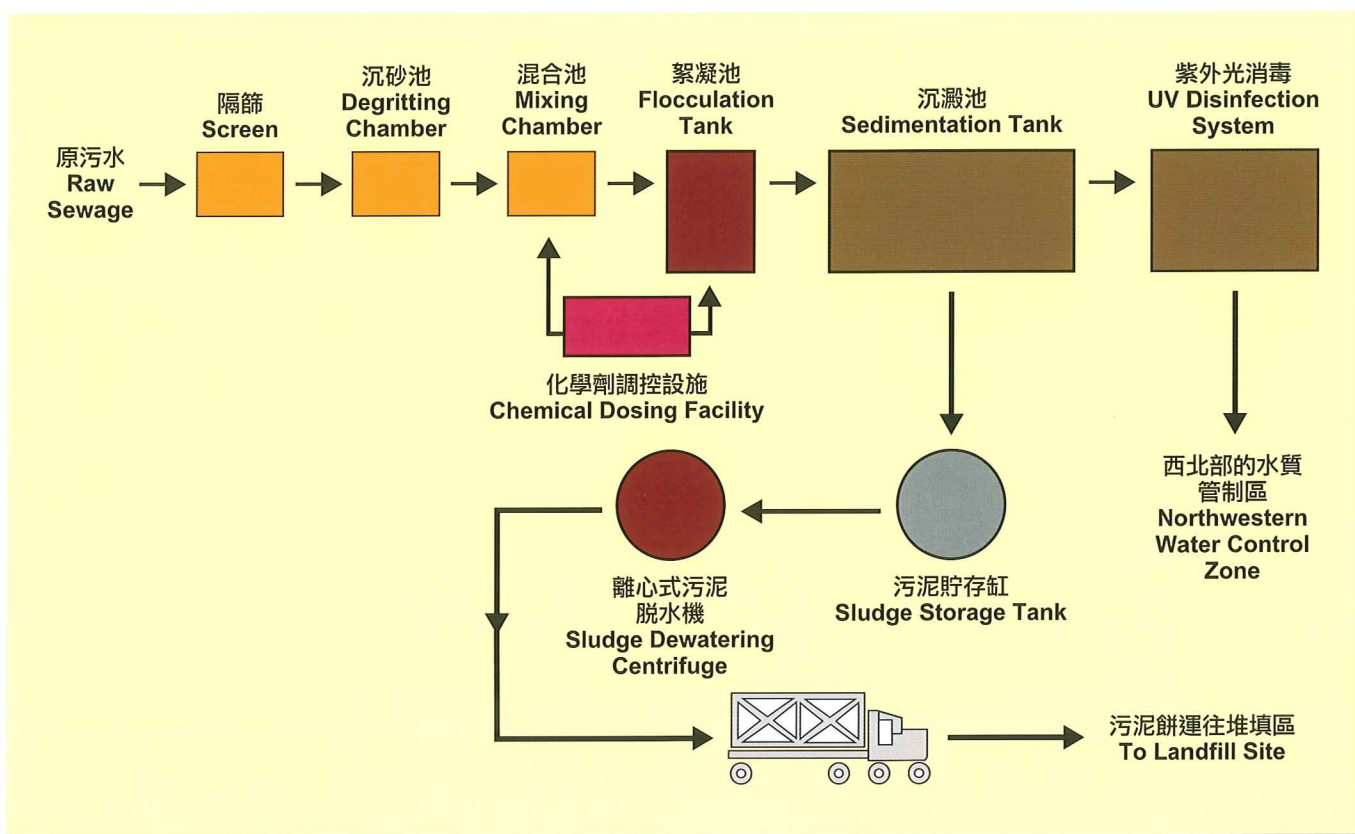


## 污水處理流程圖 Sewage Treatment Process Flowchart



## 小濠灣污水處理廠

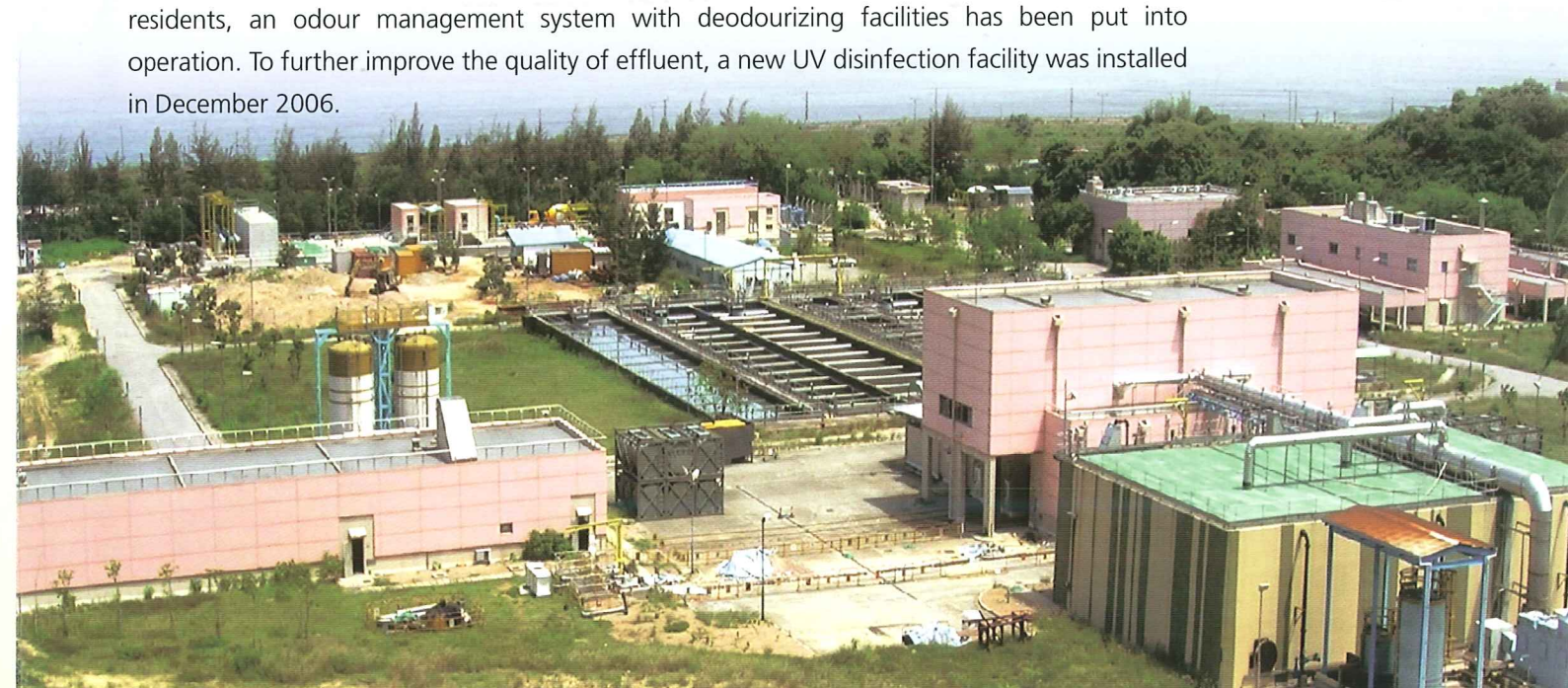
### Siu Ho Wan Sewage Treatment Works

小濠灣污水處理廠於一九九八年落成及啟用時只提供基本污水處理服務。其後，該廠於二零零四年十二月提升為化學輔助一級處理廠，為赤鱗角機場、東涌、愉景灣及香港迪士尼主題樂園大約二十萬市民提供污水處理服務。該廠每日可處理180 000立方米的污水，現時每日的處理量達45 000立方米。

為改善附近居民的生活環境及提供更優質的服務，小濠灣污水處理廠已安裝了一系列辟味設施，配合已實施的氣味管理系統。在二零零六年十二月，本廠亦增設紫外光消毒設施，進一步改善排放水水質。

**Siu Ho Wan Sewage Treatment Works** (Siu Ho Wan STW) was a preliminary sewage treatment works when it was commissioned in 1998. The plant was subsequently upgraded to a chemically enhanced primary treatment works in December 2004. It is designed to provide sewage treatment services for a population of 200,000 in Chek Lap Kok Airport, Tung Chung, Discovery Bay and Disneyland. The design flow of the STW is 180,000 m<sup>3</sup> per day and its current inflow is about 45,000 m<sup>3</sup> per day.

To act proactively in an environmental manner and to provide a better service to nearby residents, an odour management system with deodorizing facilities has been put into operation. To further improve the quality of effluent, a new UV disinfection facility was installed in December 2006.



### 經處理的排放水重要參數

#### Key Parameters of Treated Effluent

##### 重要參數 (Key Parameters)

設計流量 (Design Flow)

總懸浮固體 (Total Suspended Solids)

五天生化需氧量 (5-day Biochemical Oxygen Demand)

大腸桿菌 (E-coli) (建議proposal)

##### 排放標準 (Discharge Standards)

每日180,000立方米 (m<sup>3</sup>/day)

≤120毫克/升 (mg/L)

≤180毫克/升 (mg/L)

≤20,000個/100毫升 (Count/100mL)

### 我們的抱負 Our Vision

提供世界級的污水和雨水處理排放服務，以促進香港的可持續發展。

To provide world-class wastewater and stormwater drainage services enabling the sustainable development of Hong Kong.

## 污水處理過程 Sewage Treatment Process

### 篩除及除砂

幼隔篩和除砂池會先將污水內超過6毫米的固體廢物及砂礫清除，然後才將污水輸送往沉澱池。

### Screening & Degritting:

The large solids (over 6mm), grit and sand are removed from the sewage by fine screens and grit chambers before the sedimentation process.

幼隔篩  
Fine Screens



### 化學輔助一級處理沉澱設施

已調好劑量的化學劑(包括三氯化鐵及聚合物)會被注入沉澱設施的入口處，並於混合池內與污水快速混合。混合後的污水流過絮凝池，形成絮凝塊後分配入沉澱池。污水中絮凝物最後在沉澱池中沉澱成污泥，再利用鏈板收集器把污泥送至污泥漏斗槽，而水面的浮渣也會被浮渣收集器撇走。污泥和浮渣最後被抽送至另一組設施進行脫水處理。

整個處理過程可消除污水中百分之七十五的懸浮物和百分之六十的生化需氧量。

### Sedimentation Facilities for Chemically Enhanced Primary Treatment

Chemicals (ferric chloride and polymer) are injected at the inlet to the works at required dosages and mixed with the sewage inflow in the mixing chambers. The flow passes through flocculation tanks to form flocs. It is then distributed along a main distribution channel into sedimentation tanks. The flocs settle in the sedimentation tanks as sludge and are removed using chain and flight sludge collectors to sludge hoppers. The lighter foam and floatable solids referred to as scum rise to the surface and are skimmed off by scum collectors. The sludge, together with the scum, are pumped to a separate facility for dewatering.

The treatment process removes 75% of the suspended solids and 60% Biochemical Oxygen Demand.

沉澱池  
Sedimentation Tanks



### 化學劑調控設施

化學劑調控設施包括儲存、配劑和輸送三氯化鐵及聚合物溶液往沉澱池的所需設備。

### Chemical Dosing Facilities

The chemical dosing facilities include the storage, batching and pumping of ferric chloride and polymer solution to the sedimentation tanks.



三氯化鐵儲存缸  
Ferric Chloride Storage Tanks

離心式污泥脫水機  
Sludge Dewatering Centrifuge



### 污泥處理設施

污泥和浮渣被泵到污泥貯存缸，混和聚合物後被輸送到離心式脫水機，脫水至污泥的含固體量最少達百份之三十，然後用密封式容器把脫水後的污泥送往堆填區棄置。

### Sludge Treatment Facilities

The settled sludge & scum collected at holding tanks will be mixed with polymer before dewatering by centrifuges to achieve a minimum dryness of 30%. The dewatered sludge will then be transported using sealed containers for disposal at landfill.

### 環境保護

為保護附近水域及中華白海豚的棲息地，小濠灣污水處理廠於二零零六年十二月增設紫外光消毒設施。排放水會先經紫外光消毒後才通過一條直徑1.9米、長1.15公里的海底排放管輸送到海中(西北部的水質管制區)排放。為減低耗電量，消毒設施採用能源效益更高的低壓高強度紫外光燈系統。經使用的紫外光燈會回收及循環再用。為改善附近居民的生活環境及提供更優質的服務，本廠已安裝了一系列辟味設施，配合已實施的氣味管理系統。我們亦已開展工程，在污泥處理系統中加添辟味設施，進一步減少氣味對附近環境的影響。改善工程預期在二零零九年底完成。

### Environmental Protection

To protect nearby water body and habitat for the Chinese White Dolphin, UV disinfection facility was installed at Siu Ho Wan Sewage Treatment Works in December 2006. Treated effluent is disinfected before discharge into the sea (North Western Water Control Zone) via a 1.9 m diameter, 1.15 km long submarine outfall. The disinfection system adopted Low Pressure High Intensity UV system, which is more energy efficient. Used UV lamps are collected and recycled. To act proactively in an environmental manner and to provide a better service to nearby residents, an odour management system with deodourizing facilities has been put into operation. We are installing additional deodourizing facilities in the sludge treatment system to further control odour emission to the surrounding. These improvement works will be completed by end 2009.