

# For discussion on 24 March 2015

## 2015年3月24日討論文件

### Legislative Council Panel on Development

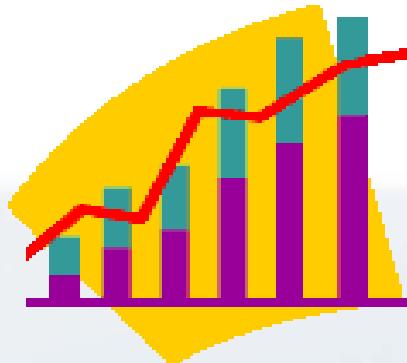
#### 立法會發展事務委員會

357WF - 將軍澳海水淡化廠第一階段設計及建造 -  
勘察研究檢討、設計及工工地勘察

(357WF - Design and Construction for  
First Stage of Desalination Plant at Tseung Kwan O -  
Investigation Study Review, Design and Site Investigation)

# 理由 (Justification)

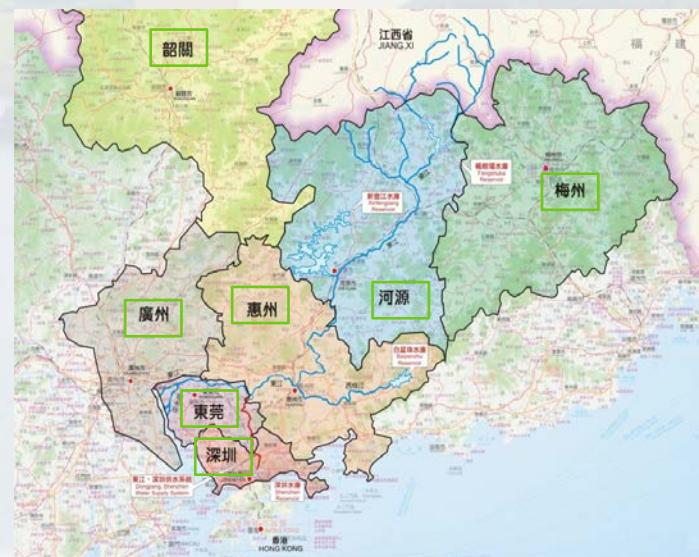
- ❖ 面對水資源各種不同的挑戰
- ❖ Fresh water resources are facing various challenges
- ❖ 發展不受氣候變化影響的海水淡化技術作為新的水資源
- ❖ Develop alternative water source by seawater desalination which is not susceptible to climate change



人口及經濟增長 (population and economic growth)



氣候變化 (climate change)



# 策劃及勘查研究結果 (Key findings of planning and investigation study)

- ❖ 逆滲透技術成熟及在香港使用技術上可行。
- ❖ Reverse osmosis technology mature and technically feasible in Hong Kong.
- ❖ 研究確認將軍澳137區是興建海水化淡廠的合適地點
  - ❖ 海水水質合適
  - ❖ 毗鄰策略性供水網絡
  - ❖ 對附近環境構成影響較少
- ❖ TKO Area 137 is a suitable location for the proposed desalination plant
  - ❖ quality of nearby seawater
  - ❖ its close proximity to a strategic water supply network
- ❖ Environmental impact minimal



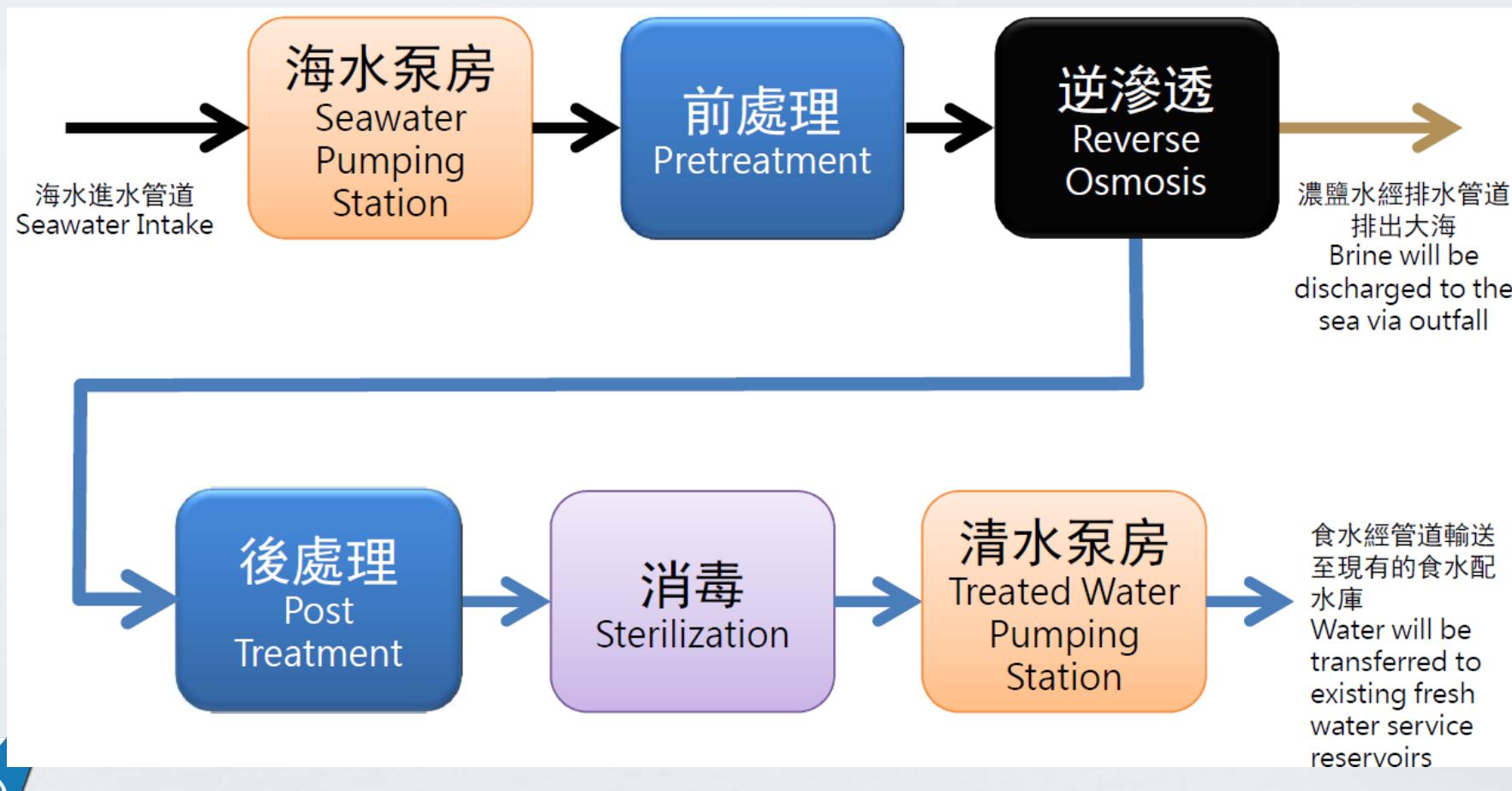
# 工程計劃 (Proposed works)

- ❖ 設計每日產量達13萬5千立方米的第一階段海水化淡廠
- ❖ Design of first stage of the desalination plant at 135,000 m<sup>3</sup> per day
- ❖ 預留空間作未來海水化淡廠擴展至每日27萬立方米
- ❖ with provision for future expansion to the ultimate water production capacity up to 270,000 m<sup>3</sup> per day



# 海水淡化廠處理工藝流程

## Treatment Processes in Desalination Plant



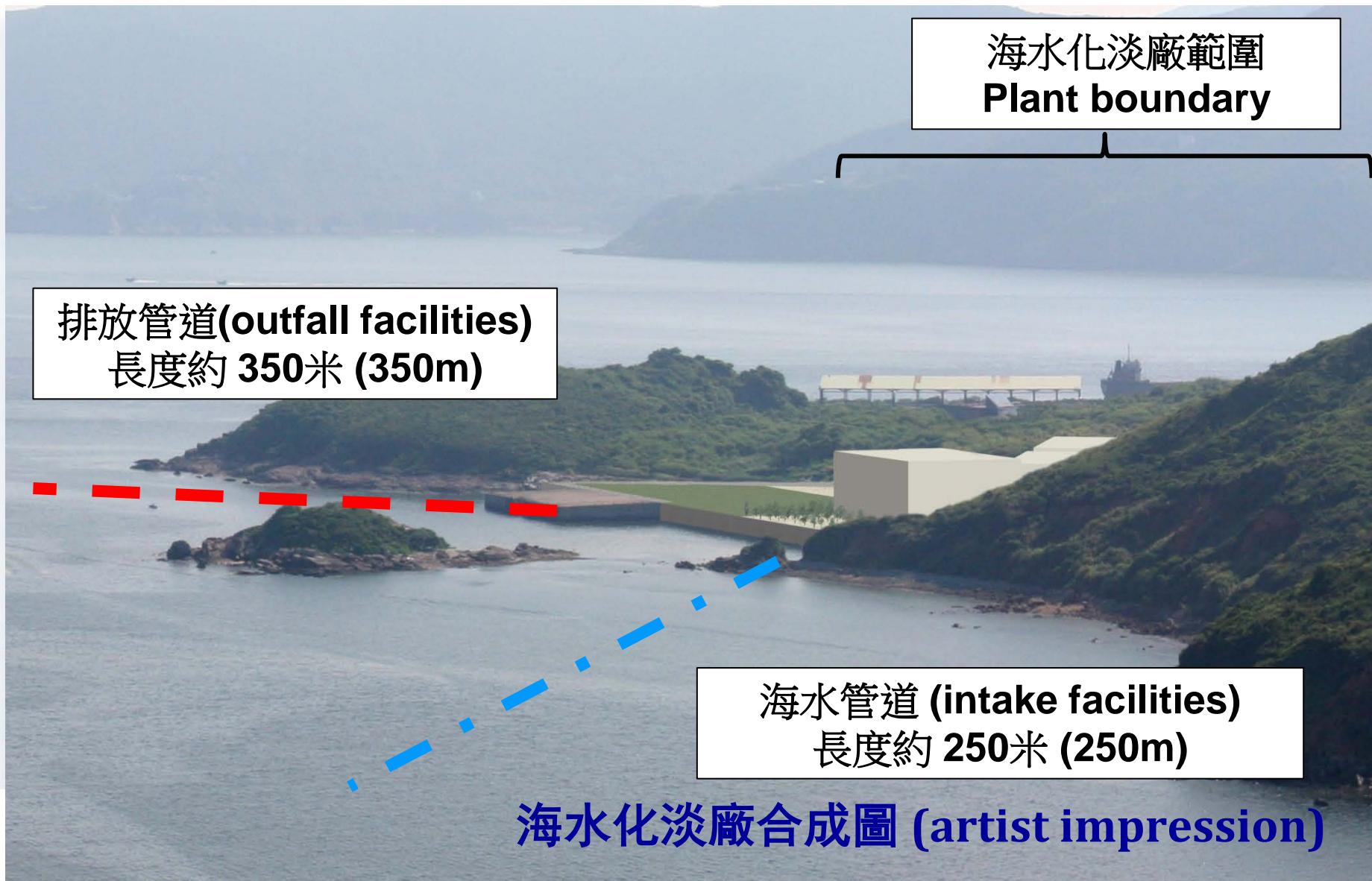
# 設計目標 (Design objective)

- ❖ 我們會應用最新的相關技術—
  - ❖ 提升能源效益
  - ❖ 減低成本
  - ❖ 減少對附近環境構成影響
- ❖ We shall apply the relevant state-of-the-art technology –
  - ❖ Greater energy efficiency
  - ❖ Lower cost
  - ❖ Minimise environmental impact



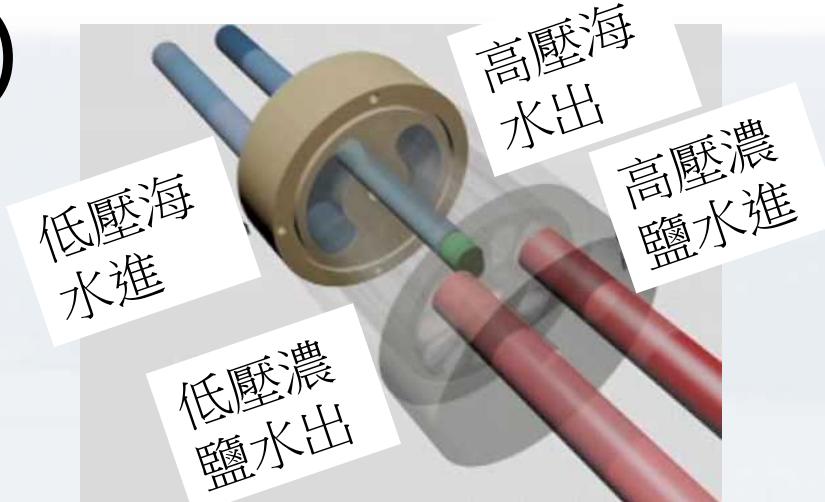
海水化淡廠合成圖 (artist impression)

# 初步化淡廠佈局 (Preliminary plant layout)



# 探討使用的特點 (Special features being explored)

- ❖ 高效能的能源回收系統來提取濃鹽水中剩餘的能量 (最高達97%)。
- ❖ **high efficiency energy recovery device**
- ❖ 採用更大的逆滲透組件 (16吋逆滲透組件)。
- ❖ **larger unit (16" RO unit)**



# 預算費用和時間表 (Budget and Time Table)

- ❖ 估計所需費用：1億5,460萬元
- ❖ Estimated Cost: \$154.6 million
- ❖ 展開顧問工作：2015年年底
- ❖ Commencement of consultancy works: late 2015
- ❖ 完成顧問工作：2017年下半年
- ❖ Completion of consultancy works: later half of 2017



多謝

Thank you

