

14th Meeting of Harbourfront Commission's
Task Force on Water-Land Interface

**The Story about cleaning up Victoria Harbour –
Harbour Area Treatment Scheme Stage 2A (HATS2A)**

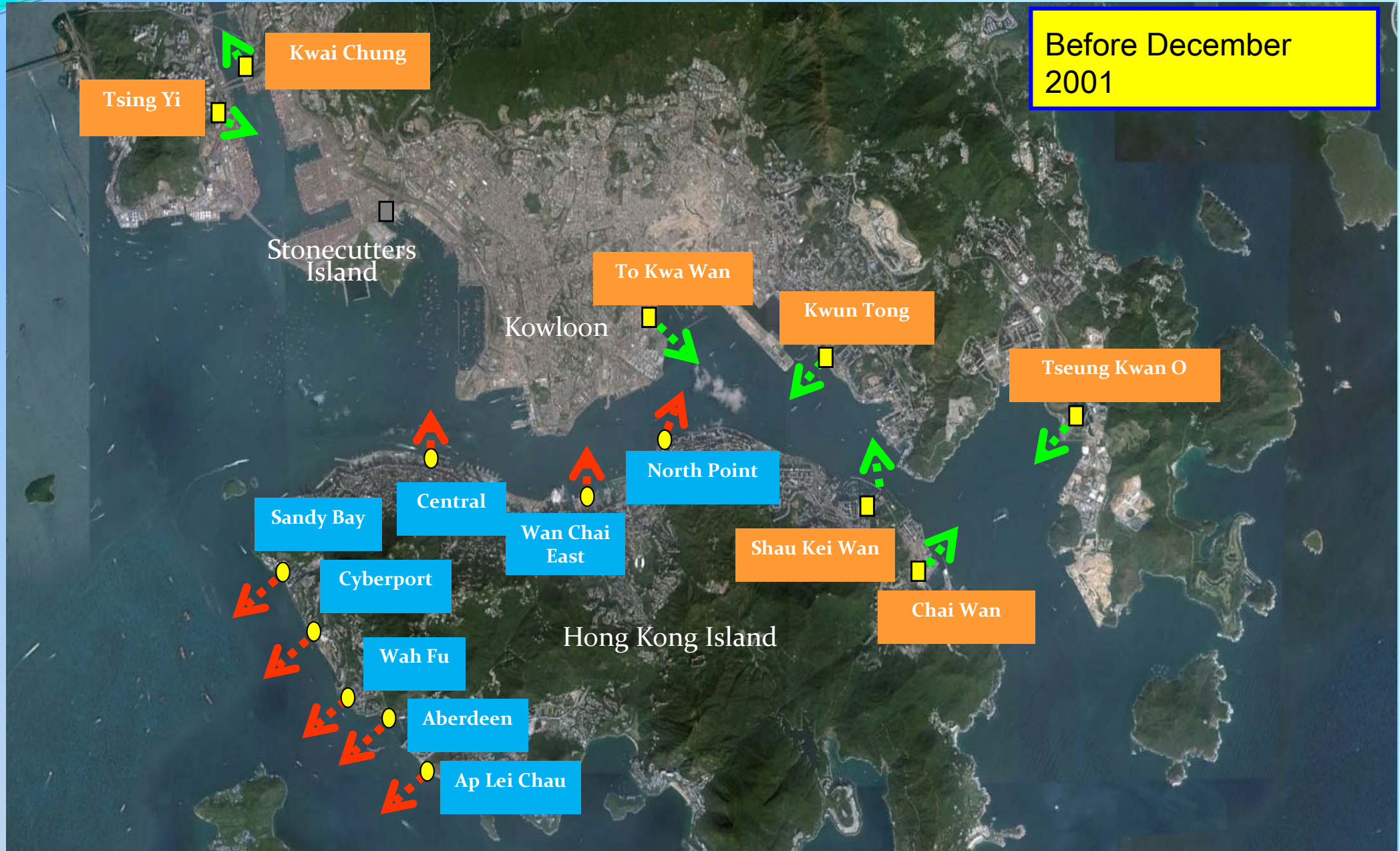
24 October 2016



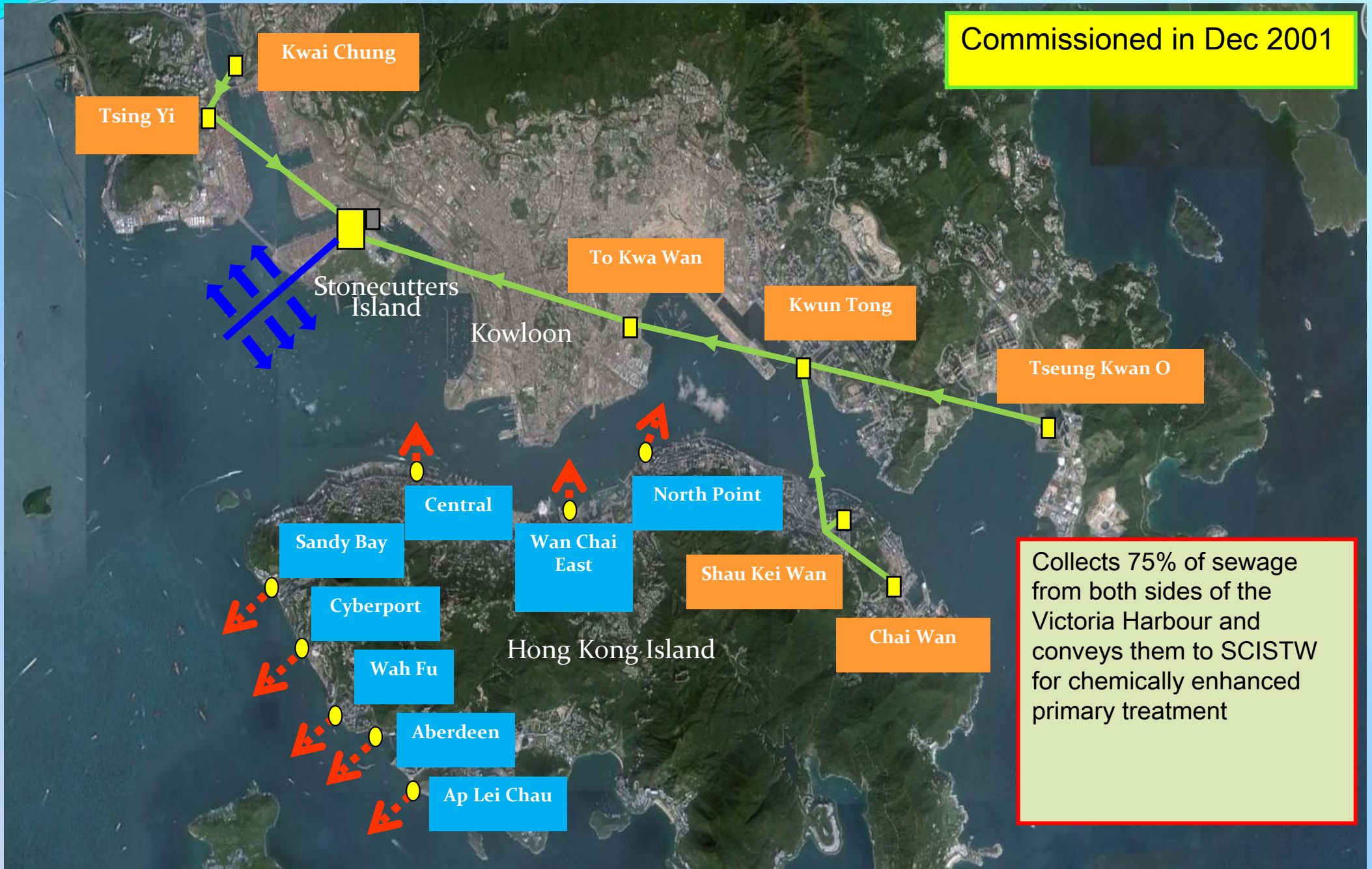
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Drainage Services Department

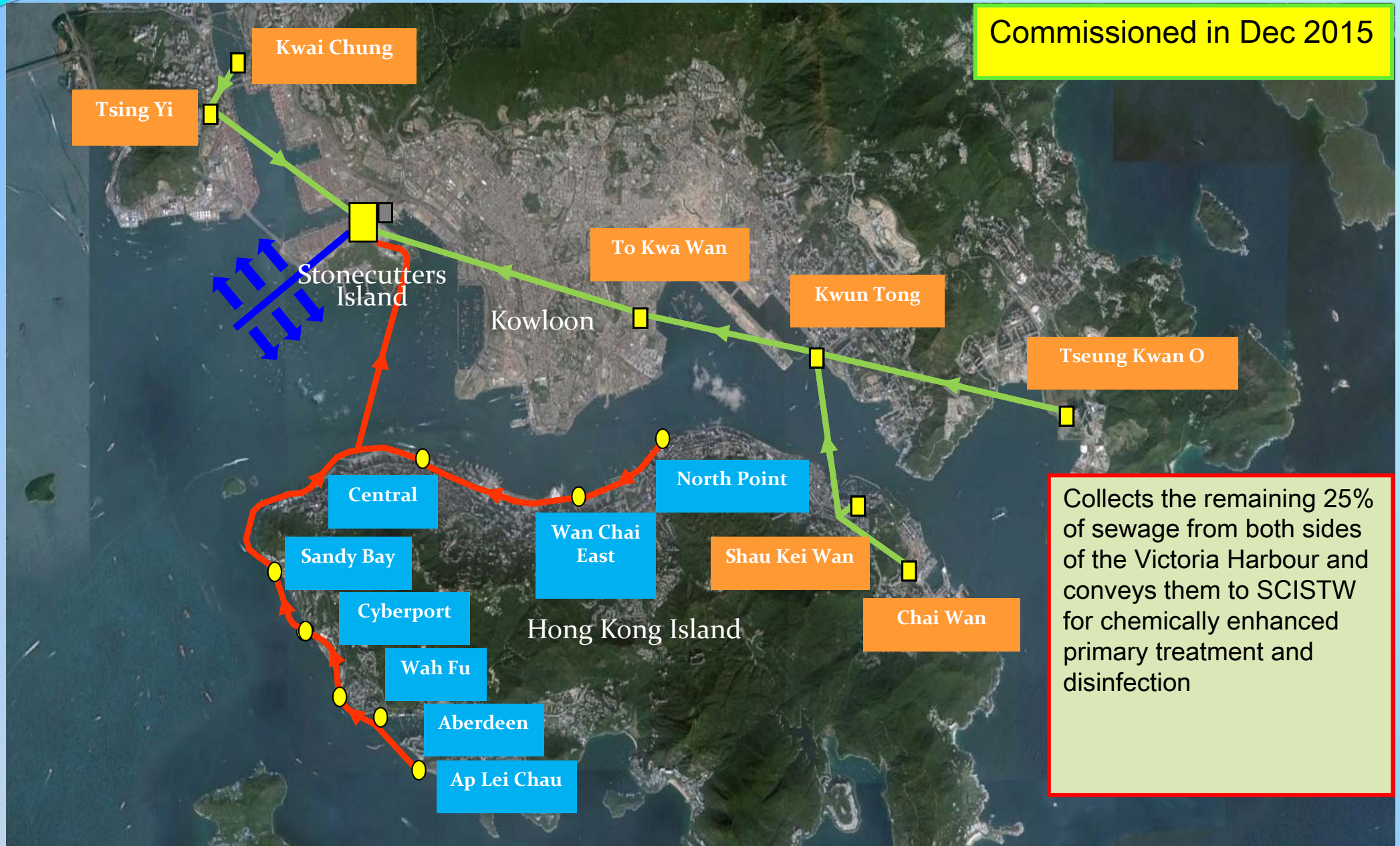
Before HATS



HATS Stage 1 Commission



HATS Stage 2A Commission



Grand Ceremony of HATS2A in December 2015



Highlights of HATS



The Environmental Infrastructure Project Spanning the Greatest Number of Districts in Hong Kong



Hong Kong's Largest Ever Environmental Infrastructure Project



World's Deepest Sewage Tunnel

Highlights of HATS



World's Largest Chemically Enhanced Primary Treatment Plant



Most Efficient Use of Land for providing a Chemically Enhanced Primary Treatment Plant



World's Most Powerful Sewage Pumping System in a Chemically Enhanced Primary Treatment Plant

Awards of HATS2A Project

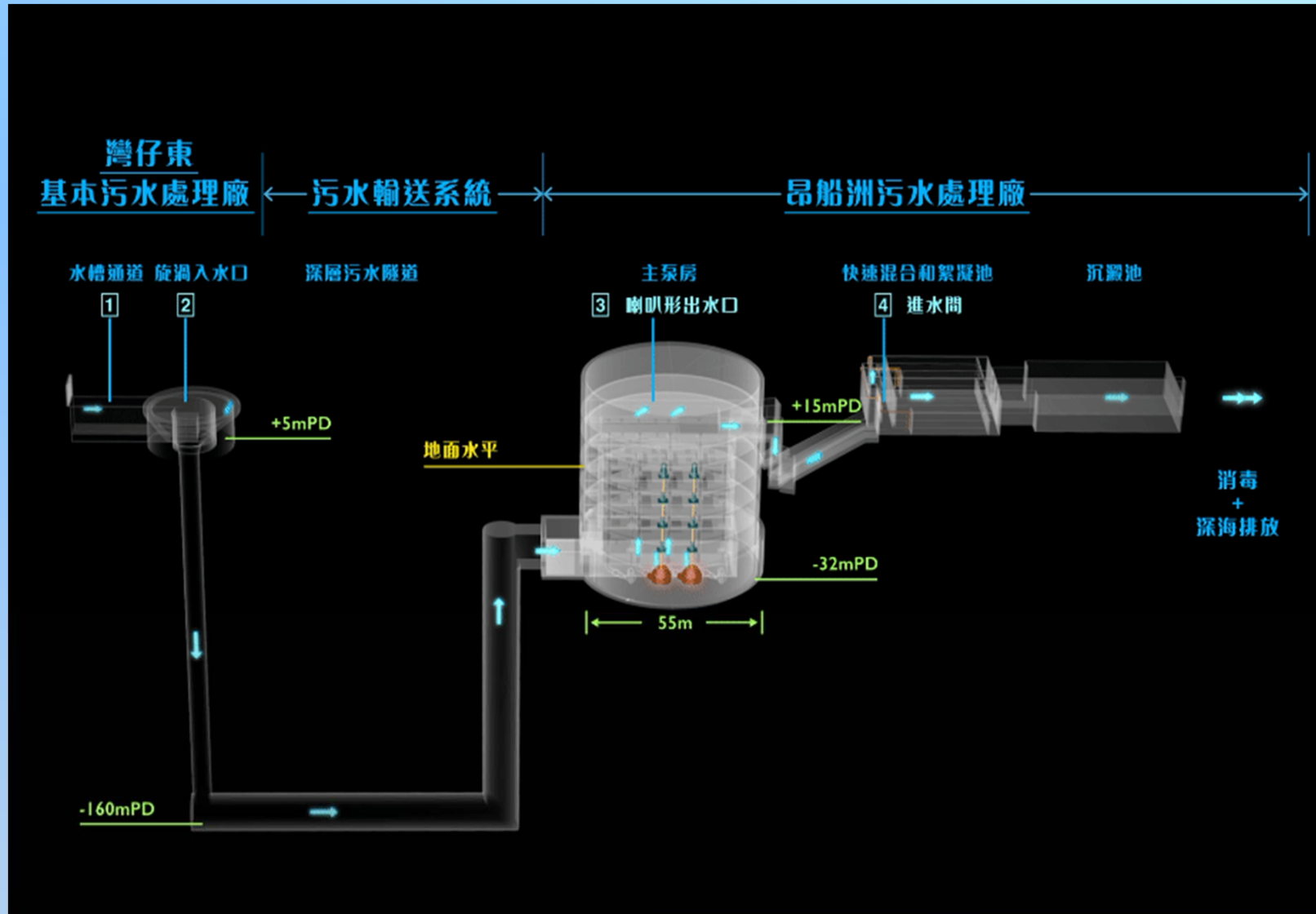


Top 10 Engineering Masterpiece in
“The Hong Kong People Engineering Wonders
in the 21st Century”

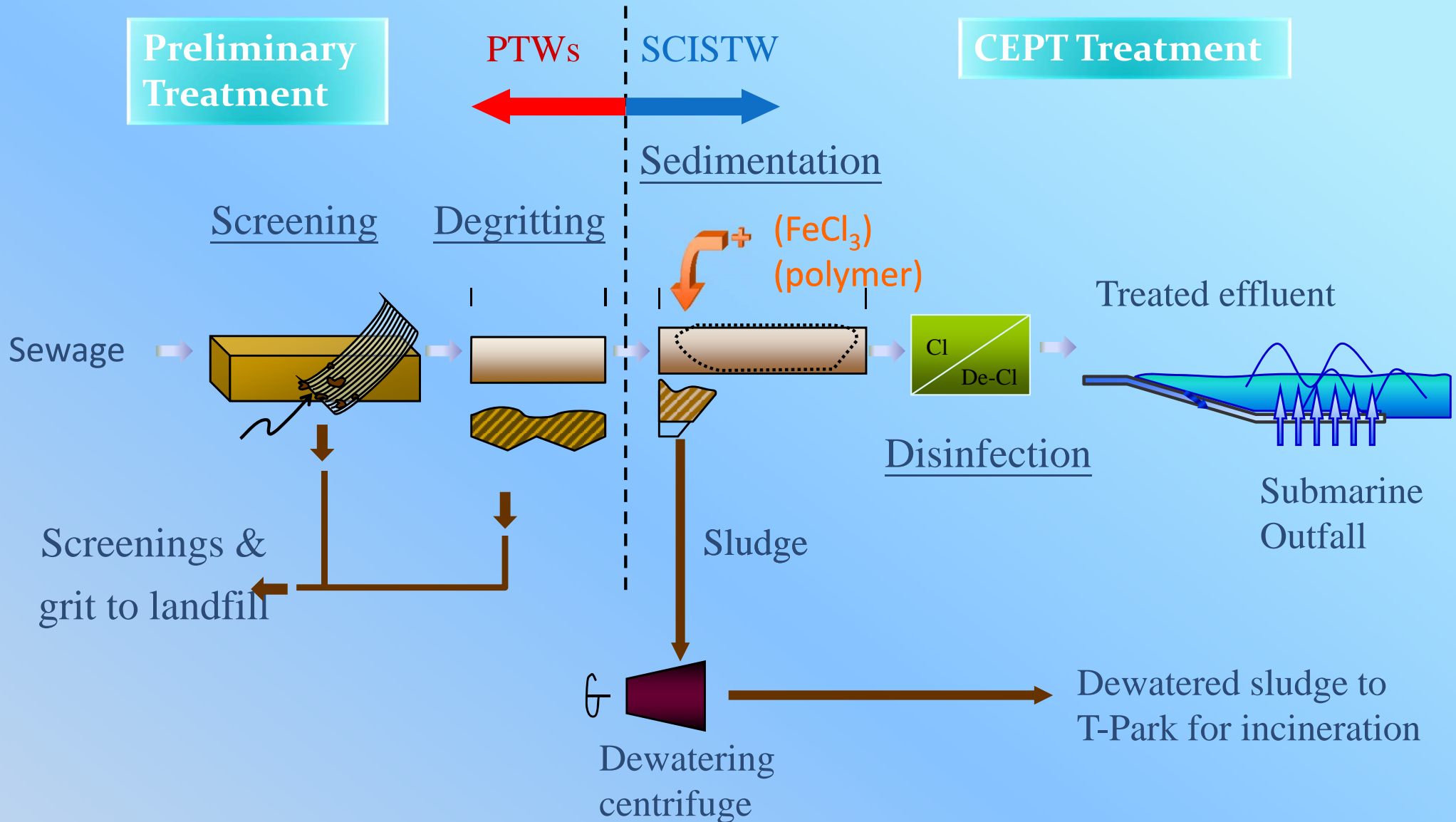
Global Water Awards 2016
– Wastewater
Project of the Year (Distinction)



Sewage Treatment Process



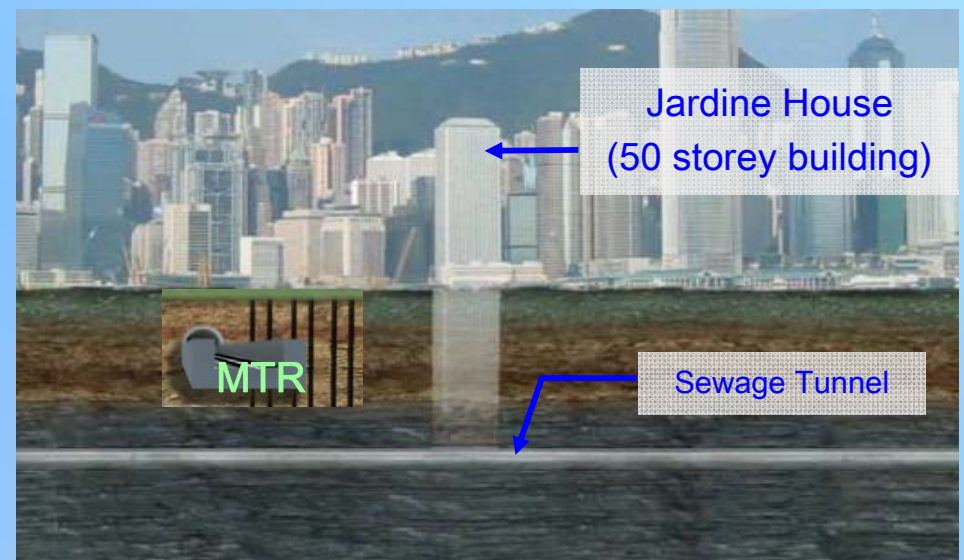
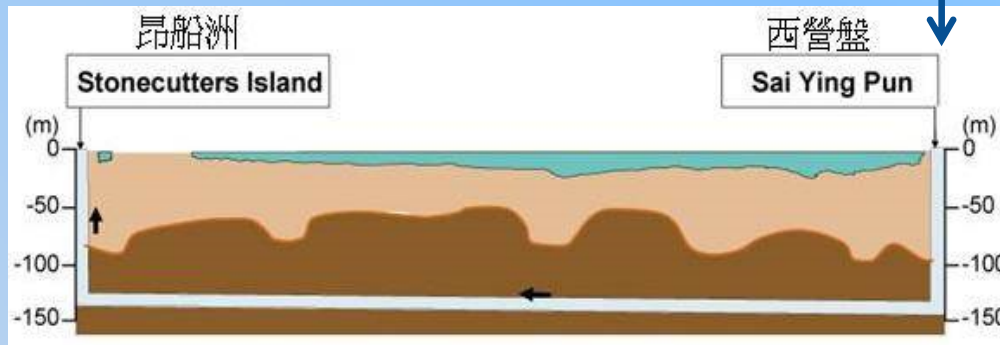
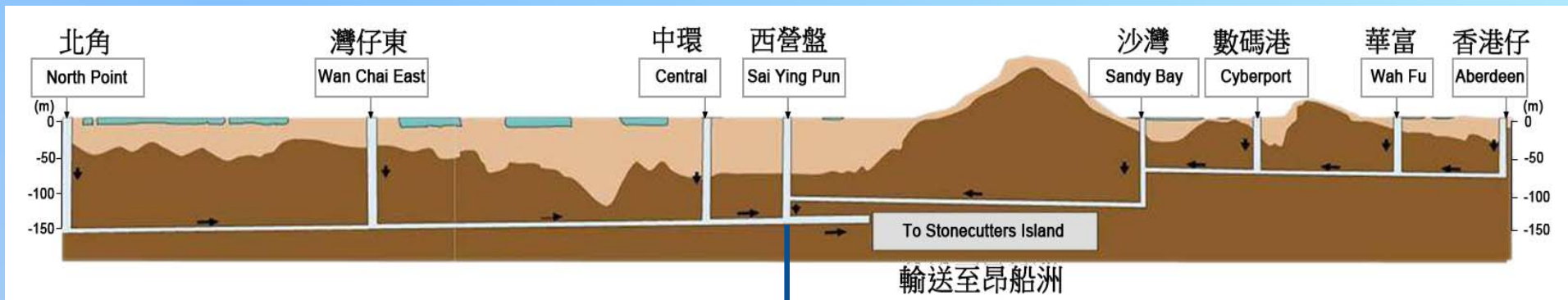
Sewage Treatment of HATS



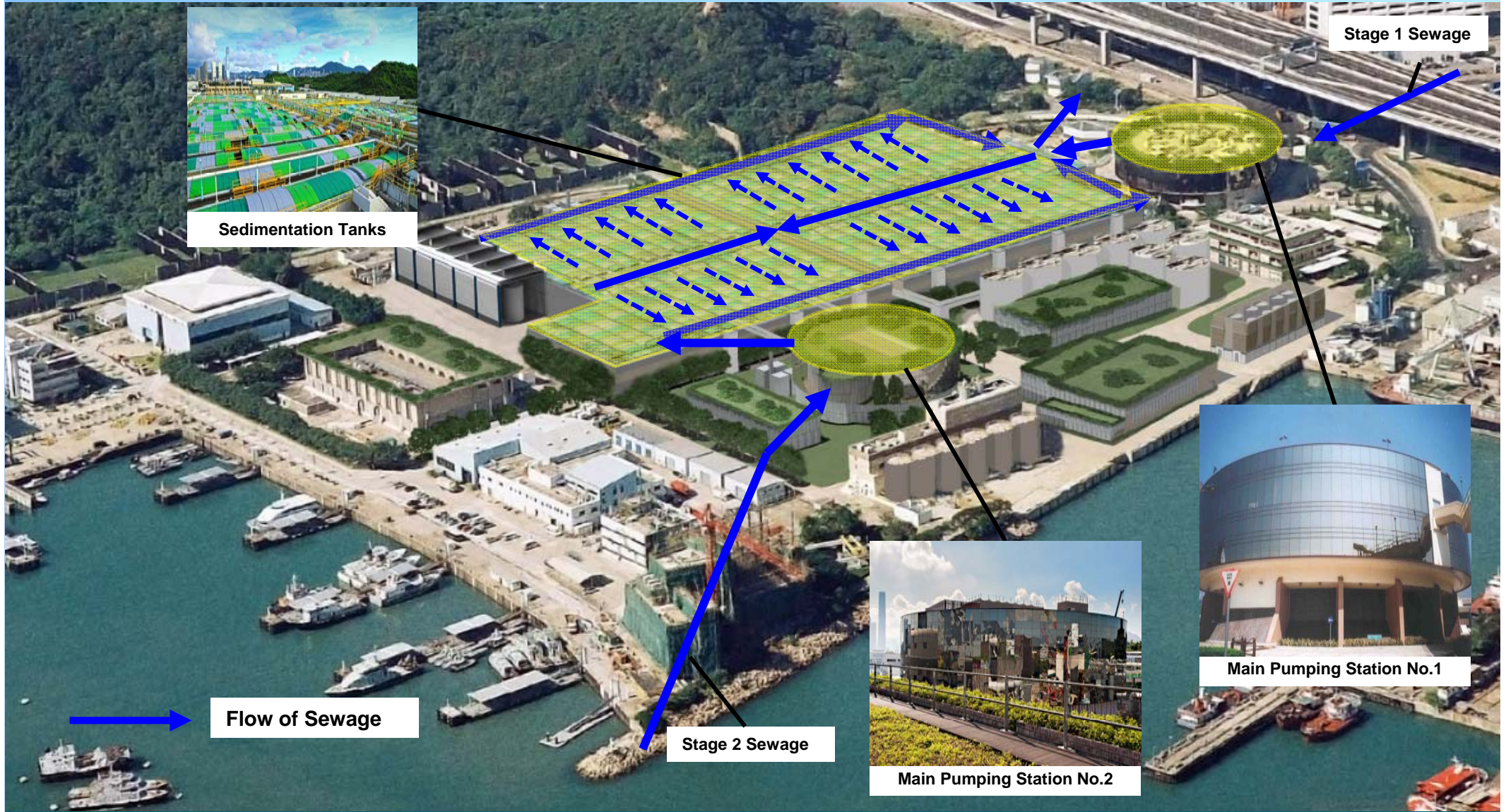
Sewage Conveyance System (Stage 2A)

- The deepest sewage tunnel in the world (reach -70 to -160mPD)
- 30m rock embedment

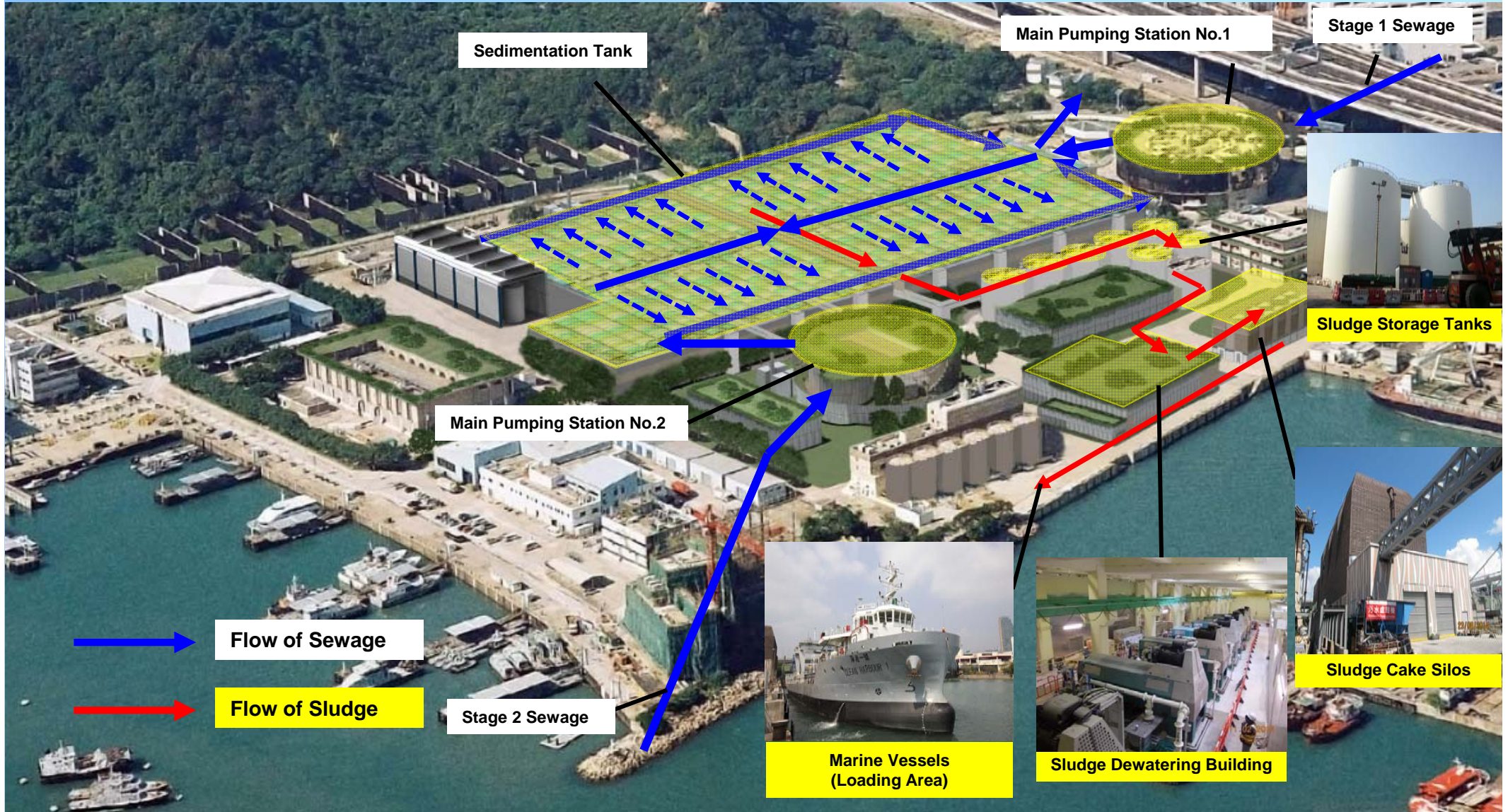
- Total 21km long (half Marathon)
- To avoid conflicts with the foundation of existing buildings and MTR



Stonecutters Island Sewage Treatment Works



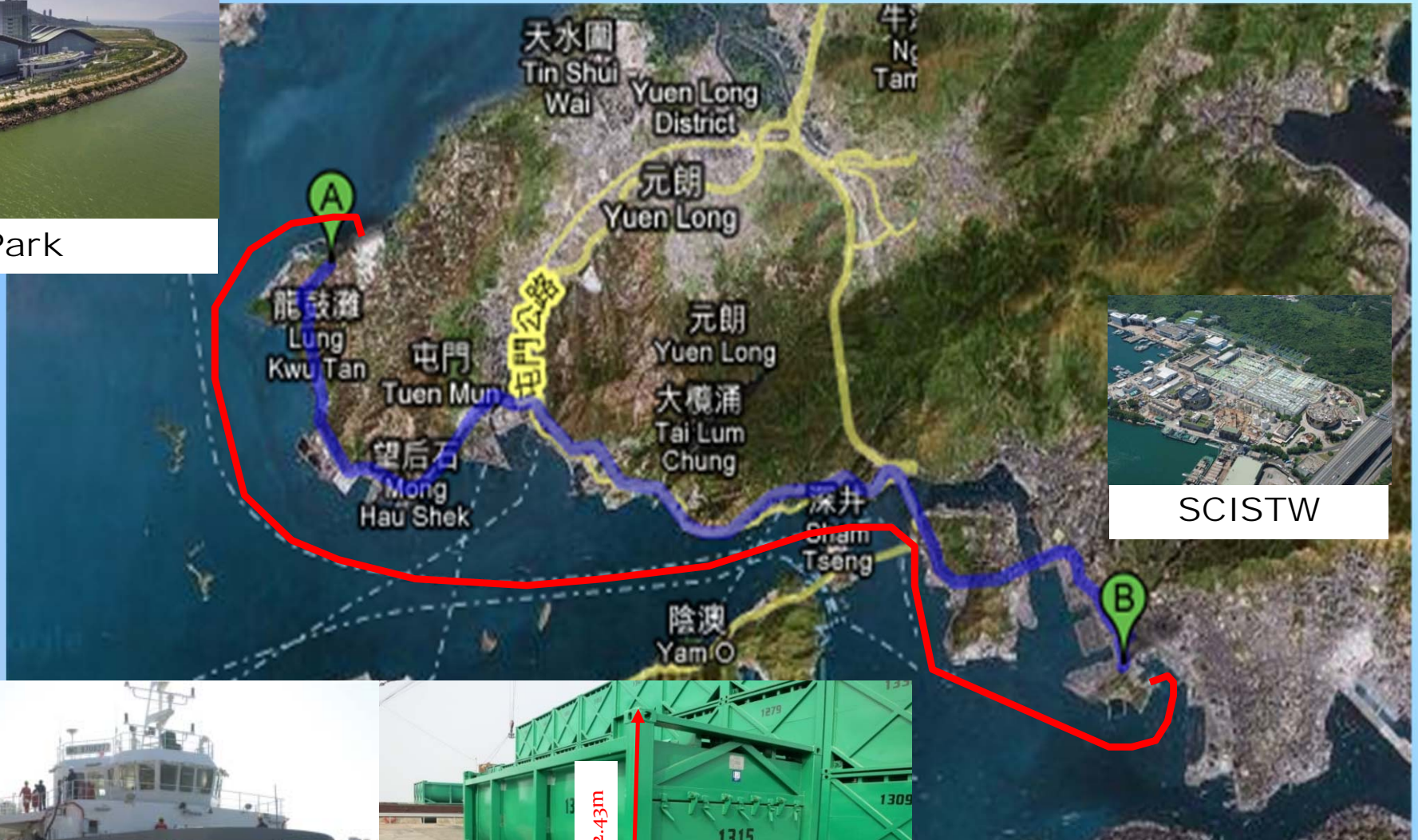
Stonecutters Island Sewage Treatment Works



Delivery of Dewatered Sludge by Sea



T. Park



SCISTW



Disinfection by Chlorination

2 Effluent tunnel



3 Dechlorination Facilities



1 Flow Distribution Chamber (+ Static Mixer) – Chlorination

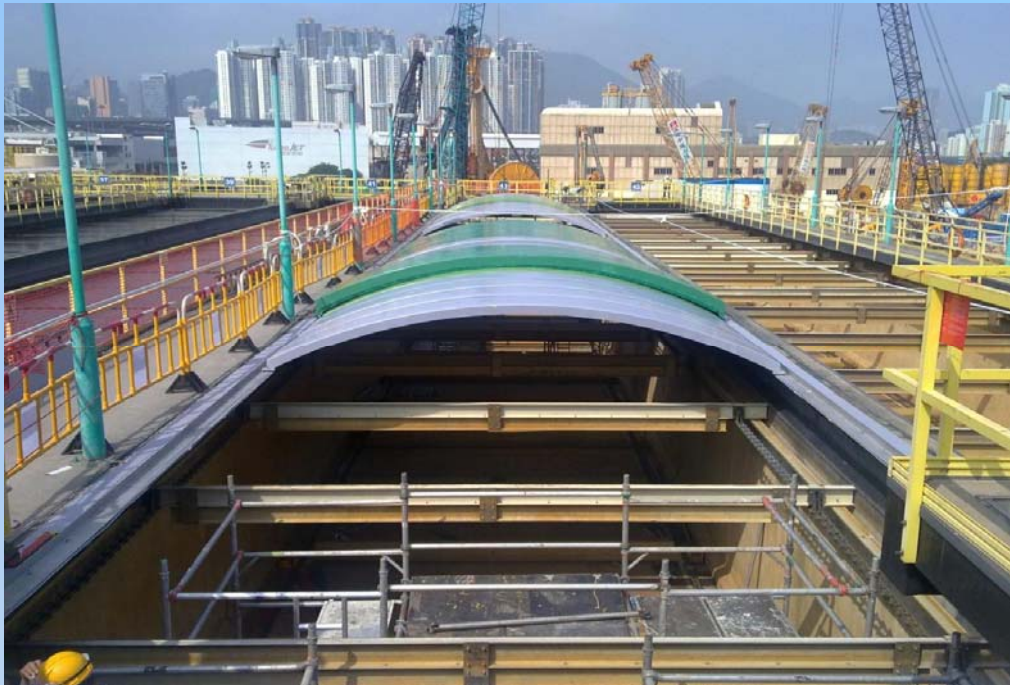


Sodium Hypochlorite Storage Tanks at SCISTW

Odour Control at SCISTW

Odour Treatment Process

1. Containment
2. Treatment
3. Disposal



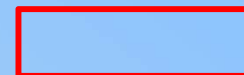
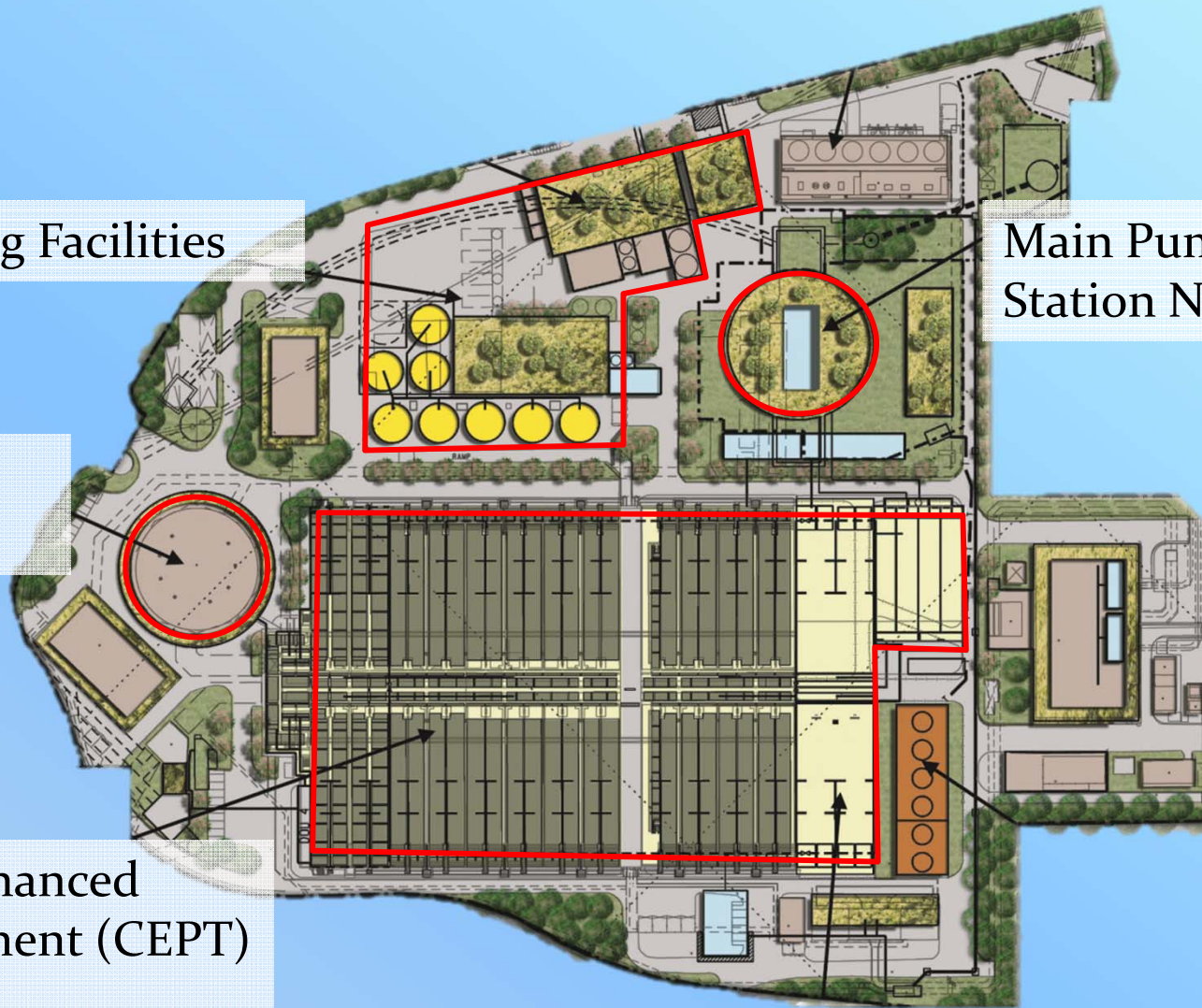
Odour Control at SCISTW

Sludge Dewatering Facilities

Main Pumping Station No.2

Main Pumping Station No.1

Chemically Enhanced Primary Treatment (CEPT) Tanks



Facilities with Odour Emission at SCISTW are installed with odour treatment facilities

Aesthetic Design, Landscaping and Beautification



Central PTW



Wan Chai PTW



Wah Fu PTW

Aesthetic Design, Landscaping and Beautification in SCISTW



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Benefits of HATS

- Stop sewage from directly discharging into Victoria Harbour
- Improve water quality of Victoria Harbour:
 - Remove 70% of Biochemical Oxygen Demand (BOD)
80% of Suspended Solids (SS)
over 99% of *E.coli* from sewage
 - Increase Dissolved Oxygen (DO) by 13%
 - HATS stage 1 reduced the *E.coli* level in the Harbour by 50%, and HATS stage 2A further reduced the *E.coli* level by 75%
- Maintain healthy marine environment whilst meeting future development needs
- Resume cross-harbour swimming race since 2011
- Re-open Tsuen Wan beaches since 2011



Looking Ahead

- Closely monitor the improvements in the water quality of Victoria Harbour after the commissioning of HATS Stage 2A
- Land has been reserved for the underground biological treatment plant (HATS Stage 2B)
- EPD's Study on Further Enhancing the Quality of Coastal Waters of Victoria Harbour to tackle near shore pollution

Thank You